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ABSTRACT

Designed primarily for the middle-level literacy worker, this monograph is intended for use as a training manual in preparing literacy teachers. The book is a general introduction to linguistics that discusses the following topics: defining the scope of linguistics, choosing the language for literacy, developing a written language, producing literacy materials for the literacy teacher, the instructional concerns of a literacy worker related to individual change, the relationship between literacy and communication, special problems of literacy such as alphabetic writing and learning to spell, and literacy and language learning. Each chapter reviews the general outline of the book, offers a brief introduction to the chapter topic, lists the chapter subtopics, and provides related discussion questions at the end of each subtopic. Linguistic terminology is set in boldface type for emphasis. Appendixes include a list of suggested readings in linguistics, a glossary of linguistic terms, and a list of English words and technical terms intended for those who will translate this book. (MAI)

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Literacy in development: a series of training monographs
Series editor: H. S. Bhola, Indiana University

U.S. DEPARTMENT OF HEALTH,
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The ABCs of literacy: lessons from linguistics

Kenneth L. Baucom

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Invitation to the reader

Reading a book can be like conversing with a knowledgeable friend. However, even the most well-written book is a one-way conversation. The author speaks and the readers listen. Sometimes the author anticipates the readers' thoughts and questions. Otherwise, the questions remain unanswered.

The International Institute for Adult Literacy Methods (IIALM) wishes to assist the readers of this monograph (and other monographs in this series) to engage in genuine dialogue. We live today in a world where communications between most parts of the world are reasonably fast, most often dependable and not too expensive. We suggest that the reader send his questions—general and specific—to the IIALM as well as his problems in working with these materials. The Institute would be glad to help or put the reader in touch with someone who can.

The reader should let the Institute know if, in his judgement, this monograph has succeeded in doing what it started out to do: (a) to provide an introduction to a part of systematized human knowledge called linguistics; (b) to indicate the relationships that exist between linguistics (the science of languages) and literacy (the teaching of reading and writing of languages); and (c) to show how various linguistic ideas could be put to practical uses by literacy workers in the choice of the language of literacy, the design of methodological approaches, and the preparation of literacy materials.

With the readers' help, IIALM can indeed become a significant institution, an international correspondence college of functional literacy. There is the need. The address to write to is:
Dr. John W. Ryan, Director,
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Tehran, Iran.

Linguistic education of the literacy educator: some observations by the Editor

What is the use of human knowledge if it is not put to human uses? Knowledge must be put to work to lighten our burdens in fields and factories. It must help us learn well and plan effectively. It should delight our hearts and revive our spirit.

Knowledge is, of course, survival. Yet human knowledge gets divorced from the lives of common men, as it gets multiplied and systematized. It develops abstract theories and models that get written up in big books. An examination of the artifacts of daily use at home, and of our customs and beliefs becomes anthropology. Ideas about our emotions, our ways of thinking and learning are presented as psychology. A look at our families and friendships and our ways of relating with and honouring each other becomes sociology. A study of how we handle the business of governing the clan or the community becomes political science. The observation of the production of wealth, its distribution and consumption in human communities becomes economics. And the examination of the sounds we make and the meaning those sounds carry becomes linguistics.

When human knowledge increases and gets thus systematized, two things happen. One is, happily, a good thing. Systematization makes further advances in knowledge possible. It makes it possible also to transfer knowledge more effectively to the coming generations of specialists. The other thing that comes from the systematization of knowledge is, however, not so good. Once knowledge gets organized into branches, each branch of knowledge gets its own priests. They guard knowledge, mystify it, clothe it in a language that the common man cannot always understand. The result is 'a suspension of discourse' between the specialist and the common man. The knowledge that should have helped us common people, oppresses us instead. Unfortunately, we become willing victims of this oppression. We begin to believe in our ignorance. We discount the knowledge we might already have. We are afraid of our anthropological, psychological, sociological or linguistic thoughts—for lack of legitimization.

Some of this is inevitable, and perhaps even necessary. It is important for each of us to know the limitations of our knowledge. Specialists do indeed often know more of the subjects of their specializations. We must call upon them when we need their help. However, we must build all the bridges we can between knowledge and action, between theory and practice, and between the specialist and the non-specialist. To build such bridges is indeed the intent of *Literacy in development: a series of training monographs.* We cannot make the literacy worker a specialist in psychology, sociology, anthropology, economics and linguistics; but he need not be left psychologically, sociologically, anthropologically or linguistically illiterate. He should be helped to examine the core of ideas in each of these fields of knowledge. This would enable him to use these ideas to illuminate some of his problems and concerns. This would enable him to know what help he needs and who can give it to him. Finally, he will be able to converse intelligently with the specialist who comes to help.

The series of monographs, *Literacy in development,* can be seen to have two parallel threads running through it. One of these is the thread of practice. Thus, one set of monographs deals with the various aspects of programme implementation of concern to the practitioner. The subjects covered are administration of literacy programmes, training and supervision of personnel, production of primers and follow-up materials, literacy curricula, designing instructional systems, use of media in literacy work, evaluation of literacy programmes, etc.

Another set of monographs has gone to the various disciplines of social and behavioural sciences such as anthropology, psychology, linguistics and the policy sciences. The questions that are raised are—What can a particular discipline teach the literacy worker? What kinds of insights can become available from a particular discipline that would clarify the various processes of literacy work in the course of its organization and implementation?

This monograph, *The ABCs of literacy: lessons from linguistics* by Kenneth L. Baucom, is the first monograph that belongs to the second set in the series. We hope that other similar monographs will follow.

The monograph here offered has been written by a linguist, who himself has had many years of practical experience as a literacy worker in Africa. Baucom not only knows linguistics very well, but he has also himself lived through the practical problems of literacy work. His approach is, therefore, not overly academic and the concerns that he addresses are the real concerns of literacy workers. The language of the monograph is simple and its format contributes considerably to the reader's ability to cope with the material. Every now and then, the writer lets the reader know where he is on his intellectual journey, what has gone before, and what is to follow.

The monograph begins by dealing with the question of what linguistics is all about. Choosing the language of literacy is dealt with next. Understandably, the choice of the language of literacy is not merely a linguistic matter; it is a political matter as well. Baucom assumes, however, that good politics must deal somehow with linguistic realities. Therefore, he carefully brings out some linguistic considerations for choosing the language of literacy. Developing a written language is the subject of a third chapter. Most literacy workers today would be dealing with languages that have already been written. However, this chapter has been included for didactic purposes: to lay bare the processes involved in converting a spoken language into a written language. This is a process which a literacy worker, whatever the level of development of the language of literacy he is using, has to deal with every day, with every individual adult learner, in every individual class or group.

The next chapter on producing literacy material is related directly to the concerns of a literacy worker. The author here deals with language in terms of the sound system, the syntactic system and the semantic system. He takes each of these three aspects, turn by turn, and brings out their various implications in the design and production of literacy materials.

In two short chapters, entitled respectively, 'Literacy and change' and 'Linguistics and communication', the instructional concerns of a literacy worker are related to his larger concerns with individual change, i.e. change in the semantic structure of the individual, which means how old world views will be exchanged for new ones. Thus, the linguist is shown to be really a communicator.

A separate chapter is addressed to the special problems of literacy such as alphabetic writing, learning to spell and teaching numeracy. This is followed by a chapter on literacy and language-learning. The main subject of discussion in the chapter on literacy and language-learning is to make clear the distinction between learning literacy in the mother tongue and learning literacy in a second language. Hints for translators, suggested readings and a glossary of terms are appended.

The series of monographs, *Literacy in development*, of which the present monograph is a part, has been designed primarily for the middle-level literacy worker. By the middle-level literacy worker we do not mean a practitioner who spends all his time working with an individual group of adults in an individual community. Nor are we thinking of a person in the higher echelons of bureaucracy who spends all his time in policy formulation, planning and administration. Instead, we have in mind a person who is in charge of a regional or a district literacy programme and is engaged both in programme planning and programme administration. He has something to do with the selection and training of personnel, with the design and production of materials, and the administration and supervision of a large field staff once policy decisions have been made. He is literally a man in the middle. We hope this monograph will contribute both to his training and education.

The monograph does not cover everything in linguistics, since everything linguists study is not of direct usefulness to literacy workers. All of the problems of a literacy worker have not been covered here either, since all literacy problems do not have linguistic solutions. The monograph, in spite of its direct focus on literacy work, ends up being an excellent general introduction to linguistics and may also interest the lay reader.

Readers may find two other monographs in this series of direct interest to them. Sohan Singh's *Learning to read and reading to learn: an approach to a system of literacy instruction* could, indeed, serve as an example of how and in what form the linguistic ideas that Baucom talks about could actually be put to work in the design of systems of literacy instruction. *The process of primer construction* by Ernest W. Lee, could serve as an excellent companion volume.

H.S. Bhola

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CHAPTER ONE

How to use this book

HOW TO USE THIS BOOK; What linguistics is all about; Choosing the language for literacy; Developing a written language; Producing literacy materials; Literacy and change; Linguistics and communication; Special problems in literacy; Literacy and language-learning.

Is this book intended for you? It is intended for use by middle-level literacy workers. But who the middle-level literacy worker is and what he does are different from one situation to another. Here are some possible descriptions of this middle-level literacy worker. Do they describe you at all?

1. Trainer and teacher of literacy personnel at a national centre.
2. Assistant in programme planning on a national or regional basis.
3. Writer of course material on a national or regional level.
4. Developer or assistant developer for a second-language learning programme.
5. Participant in developing new orthographies.
6. Head of staff of a regional literacy section.
7. The head of a district literacy section.

If you fall somewhere within this description, the book is intended for you. If you are not described by these characteristics, it is possible that the book is not for you, unless our description of the middle-level worker is incomplete.

The purpose of the book is to help you, a practical literacy worker, find out how the science of linguistics can aid you in your work. We intend it to be a practical book. But it is not a novel to be read through quickly in an evening. And it is not an encyclopedia that you can open at any section to gain immediate help.

We expect that you will study the book from beginning to end. The first chapter will give you much basic information about language. You will need that information in order to understand later chapters. The titles of some of the chapters (for example, 'Choosing the language for literacy') may make you think that the chapter is planned for others, but not for you. This is not true. All of the chapters are planned for everyone using the book. However, some are more useful than others. Suggestions as to which segments might help you are given in Table 1 on page 16.

Please notice that we have already used the words 'read', 'study' and 'use' in describing the purpose of this book. We hope that you will do all three of those things.

The book is made up of explanations, examples and questions for you to answer. Because the book is written in English, many of the examples will be from the English language. In that way, everyone who reads the book will be able to understand those examples. There are examples from other languages; we believe that you will be able to understand those examples also. Whenever you are given examples, please try to think of similar examples from other languages that you know. Then you will truly be using the book as you read it.

Because we want you to study the book, we have put it in a special form. Here is what you can expect from the book.

1. Every chapter will begin with the title of the chapter, for example:

CHAPTER TWO
What linguistics is all about

Then follows a block showing you where you are in the book. For example, the block following the title of Chapter 2 is as follows. (Notice that the small capital letters show where you are in the book.)

How to use this book; WHAT LINGUISTICS IS ALL ABOUT; Choosing the language for literacy; Developing a written language; Producing literacy materials; Literacy and change; Linguistics and communication; Special problems in literacy; Literacy and language-learning.

Notice that these chapter blocks are displayed in a special way with a double line above and below them.

2. Next there will be a brief description of what the chapter is about.

3. Each subsection of the chapter will then begin with a block reminding you of where you are in the chapter. For example, one page of Chapter 2 has the following block. (Again the small capital letters show you where you are in the chapter.)

Chapter 2—What linguistics is all about: What this chapter is about; Theoretical linguistics; Language change; DIALECTOLOGY; Socio-linguistics; Psycho-linguistics.

Notice that these section blocks have a thin line above and below them.

4. Throughout the text there are paragraph keywords in **bold type** to point out what the content of the paragraph or subsection is about.
5. At the end of most sections, there are questions *in italic* for you to answer or exercises to be carried out. If you have difficulty answering the questions, you should look back through the section. You can then use the keywords in bold type to help you find the proper place to read.
6. At some places in the text you will find a warning guide: 'Before you read further'. These guides will point out things you have already studied which you will need to understand before reading further. In case you have forgotten any of them, you will be referred back to the relevant subsection. There is also a Glossary at the end of the book. If you have forgotten the meaning of a linguistic term, you can find its meaning there.

Remember that the book is intended to be read by middle-level literacy workers. It is *not* intended for middle-level workers to use as reading material for first-level workers. You will not perhaps put it in the hands of your literacy teachers to read on their own, but use this as a trainers' manual in training literacy teachers.

Some parts of the book will be helpful to some people, and some parts will be helpful to others. Table 1 is a general guideline as to who might benefit most from various sections. Note that everyone should study Chapter 1. It gives the concepts needed later.

TABLE 1. *Who will benefit most from the chapters of this book*

	Who should study				
Topic	Course writers	Programme planners	Ortho. developers	Teacher trainers	Lg. programme developers
What lin. is all about	x	x	x	x	x
Choosing language		✓	x	✓	✓
Devel. written language		✓	x		
Producing lit. materials	x	x		✓	
Literacy and change	x	x		x	x
Lin. and communication	x	x		x	x
Special problems in lit.	x	x	x	x	✓
Lit. and lg./learning	x	x		✓	x

x = generally useful; ✓ = useful in some situations.

CHAPTER TWO

What linguistics is all about

How to use this book; WHAT LINGUISTICS IS ALL ABOUT; Choosing the language for literacy; Developing a written language; Producing literacy materials; Literacy and change; Linguistics and communication; Special problems in literacy; **Literacy and language-learning.**

What this chapter is about

Linguistics is the scientific study of language. Writing is a form of language, and therefore the study of written materials is part of the study of linguistics. There are, of course, many parts of linguistics which do not have anything to do with written language. These will not be covered in this monograph.

In these 'lessons from linguistics', we are not going to give a general course in linguistics. We are only going to deal with those parts of linguistics which can help in an understanding of reading, writing and literacy programmes.

In the same way, not all of a literacy programme is related to linguistics. In particular the technical parts of a functional literacy programme have little direct link with linguistics. Linguists cannot tell you how to grow cotton or produce matches. Linguistics has most to say about the processes of reading and writing. Therefore, reading and writing will play an important role in this monograph. You should not think, however, that we are neglecting the very important psycho-social and development aspects of literacy. We do not mean to suggest that a literacy programme should be limited to the mechanics of reading and writing. For this reason Chapter 6, 'Literacy and change', and Chapter 7, 'Linguistics and communication', are important parts of this book.

There are five parts of linguistics that we will look at in this chapter.

The first of these is what I am going to call **theoretical linguistics.** This is the study of the nature of an individual language and of language in general. It asks questions such as: 'What is the basic nature of language?'; 'What is universal about language?' It tries to provide a theoretical model for language.

The second area we will examine is the topic of **language change.** Here we will look at questions such as: 'Do all languages change?'; 'What is the effect of one language upon another?'; 'Can language change be prevented?'

The third area will be **dialectology.** This is the study of the relationship of dialects of language to each other and the differences between dialects and languages. We will look at such questions as: 'How do dialects come about?'

The fourth area that we will deal with will be that of **socio-linguistics.** This is the relationship of language to society: 'How is language used in society?'; 'What is the social function of a particular language or a particular dialect?'; 'How is a language different in different social circumstances?'

The fifth area of linguistics that we will look at will be that of **psycholinguistics**—and in particular some very important areas of psycholinguistics: 'How does one learn a language?'; 'What is there about language learning that is universal?'

Theoretical linguistics

Chapter 2—What linguistics is all about: What this chapter is about: THEORETICAL LINGUISTICS: Dialectology; Socio-linguistics; Psycho-linguistics.

Although there are a number of different linguistic theories, all of them agree that a spoken language has three basic components: (a) a **semantic component** (that is the part of language which deals with meaning); (b) a **syntactic component** or syntax (that is what many people would call the grammar of language); and (c) a **phonological component** (that is the sound part of language). These three components can be seen in the following diagram:

Semantic component
Syntactic component — Language
Phonological component

Modern theories of language differ as to which of these three components is considered to be the most central part of language, and they may differ on how one component is related to another. But they all agree that language is made up of three basic parts—meaning, sound and syntax.

Let us look in a little detail at how these components work in a language and, also, **what language is not.** A spoken language makes use of sounds to convey meanings. But human language does not do this directly. By this I mean that in human language there is not one meaning with one sound directly related to it. This may be true for the language systems of other animals. But with human beings it is not true. Thus, it is not true that a meaning such as 'mountain' has a single sound which represents that meaning. Nor is it true, on the other hand, that a single sound such as 'b' wholly and always represents a single meaning.

If a language operated in the above fashion, the number of meanings that you could produce by language would be limited. It would be limited by the number of individual sounds that you could both produce and easily distinguish. If you could make and distinguish fifty sounds, then you could have fifty meanings, and if you could make and distinguish 100 sounds, you could have 100 meanings—and perhaps some simple combinations of those meanings. But, no matter what happened, the meaning system would be very restricted by the small number of sounds.

In order to solve this problem of being restricted to only a few meanings by a few sounds, natural human language has found this solution. It has developed a structure through which **an infinite number of meanings can be expressed with only a few sounds.** This structure is the threefold semantic, syntax, phonology divisions that were mentioned above. Thus, a person is able to produce a limitless number of sentences in any language—even sentences which have never been produced before in the language—all by using a very limited number of sounds. This is what makes human language so highly useful. It can express things that have never been expressed before by using sound units which are very limited in number.

Let us look more closely at **phonology**—the sound component of language. This is a good place to start. It is on the surface of language and is the component most easily dealt with.

Linguists have traditionally distinguished a limited number of sounds in each human language. Thus, one might say that the sounds of Ewe (a language of Togo and Ghana) are limited in number to thirty-six. When linguists have said this, they have not meant that there are only thirty-six single and discrete sounds within the language. They mean that there are thirty-six classes within the language, each of which might be realized by a number of similar but slightly different sounds. These sound classes have been called **phonemes.**

All of this might be sounding a bit complicated. So we will look more specifically at what is meant by phonemes. We will use as an example the phonemes of Akha, a language spoken in parts of Burma, China, Laos and Thailand.

Akha has twenty-six consonants and thirteen vowels, giving a total of thirty-nine sound classes. Each of these classes is called a phoneme. One of the consonant phonemes of Akha is 'p'. But 'p' represents a sound class, not an individual sound. 'P' is not always pronounced the same way in every word in Akha. Before some vowels, 'p' in Akha is formed with a short burst of air at the end. This burst of air is called aspiration. And a 'p' with a burst of air is described as being aspirated. (It sounds much like the English 'p' in 'pot'.) But before other vowels in Akha 'p' is called unaspirated. (An unaspirated 'p' sounds much like the English 'p' in 'spot'.)

Thus, the Akha phoneme 'p' has two pronunciations. One is an aspirated sound. And one is an unaspirated sound. Each of the separate sounds is called a **phone,** but the abstract class 'p' is called a phoneme.

When we said earlier that Akha has thirty-nine sound classes, we meant that it has thirty-nine phonemes. But it has more than thirty-nine phones. Yet Akha uses only thirty-nine phonemes to express all of the countless meanings that the language can produce.

What linguists call phonemes are **not just consonants and vowels.** In addition, individual languages might have phonemes of tone, of pitch, of stress, of length of vowels, of length of consonants, etc. For example, Akha also has three tone phonemes in addition to its thirty-nine consonants and vowels. There are numerous types of phoneme in addition to consonants and vowels. Yet all languages do have consonants and vowels as their basis. We will talk about this to a greater extent later.

For the moment, we might point out that alphabetic writing is a system for giving a visual symbol for each of the phonemes of a language—or at least for most of the phonemes of a language.

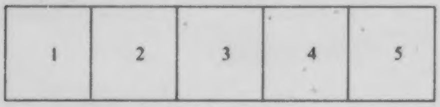
Now that we have looked at the sound component of language, we will look very briefly at **semantics,** the meaning part of language. All languages give structure to meaning. One way in which they do this is to **give linguistic importance to different aspects of meaning.** For example, many languages give great importance to differences in meaning between living things (animate objects) and non-living things (inanimate objects). In such languages many meaning units must designate whether the object is living or non-living. English, for example, normally refers to living objects in the singular with the forms 'he' and 'she', and to non-living forms with 'it'. But many languages do not make such a distinction in pronoun forms.

Here is another example. Many languages assign importance to difference in number between only one thing and more than one thing. The structure of these languages demands that we say whether there is only one thing involved or more than one thing involved. Other languages give importance to the 'one', 'two', or 'more than two' framework. In such languages it is necessary to say whether there is one thing involved, two things involved, or more than two things involved. For example, in Nama Hottentot the following forms occur in the masculine pronoun:

tita	'I'	sakhom	'we (two)'	sage	'we (more than two)'
sats	'you (one)'	sakho	'you (two)'	sago	'you (more than two)'
ǁib	'he'	ǁikha	'they (two)'	ǁigu	'they (more than two)'

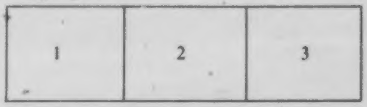
Languages do not only give differences in importance to different aspects of meaning. **Different languages also divide some views of the world in different fashions.** One of the most obvious places to see this is in how different languages divide the meaning of colours. Different colours are in fact a continuous band of light wave-lengths without any clear separation. Languages divide the wave-lengths into different colours. One language might divide these wave-lengths into five major sections. The speakers of such a language will have five major colours. But another language might divide the very same wave-lengths into only three major sections.

Language X



The colour spectrum

Language Y



The colour spectrum

Speakers of language Y will have only three major colours. It will be difficult for speakers of language X to understand how speakers of language Y divide up colours. For the meaning systems for colour are different in the two languages.

Another very important thing about meaning in language is that languages give **emotional meanings** to different denotative meanings. The meaning 'building' in English may not cause much emotional response. But the meaning 'shack' probably does. The emotional response associated with specific words is a very important topic for a literacy worker.

We will discuss this topic again later in this book.

Perhaps the parts of the meaning system of language that we have been talking about are fairly easy to understand. But the meaning systems of language are very complex. And linguists are only now beginning to come to terms with some of the difficulties of the meaning side of language. But the semantic component of language is extremely important in the production of literacy materials. For this reason, there will be a somewhat lengthy discussion of semantics in the chapter in this book which deals with the production of materials (Chapter 5).

Now we will turn to the **syntactic component** of language. The syntactic component is what many people would normally think of as the grammar of the language. But linguists see the syntactic component of language as a very complex thing. It is certainly a far more complex thing than simply a list of grammatical rules such as one learns in school about a language. The discussion of syntax in this book is very limited, and you should realize that you will learn only a very few concepts. These are the ones which relate most directly to literacy.

The linguist deals with a number of grammatical concepts that are different from those of traditional grammar. There are two of these concepts which are especially important for the literacy worker to understand. These are the concepts of the **morpheme** and the **word.** Remember for the moment that we are talking primarily about spoken language. Therefore, when we talk about the word, we do not mean simply a written unit which has blank space on each side. This would be an orthographic word which is not the same thing as a linguistic word.

A morpheme is the smallest unit of sound in a language which is related to one meaning. A word is a unit which can stand alone in a language. A word might be made up of one morpheme, or it might be made up of more than one morpheme. In English the one word 'incomplete' is made up of two morphemes, 'in' meaning 'not', and 'complete' meaning 'whole, finished'. In Maori the word *ŋau* is made up of one morpheme 'bite'. And the word *ŋaua* is made up of two morphemes, *ŋau* meaning 'bite' and *a* meaning 'passive voice'. Thus the word *ŋaua* would be translated into English as 'be bitten'.

It is important to remember that a word might consist of only one morpheme. But it is also very possible for a single word to consist of more than one morpheme.

The concepts of morpheme and word will be discussed at greater length in these lessons: (a) when we are talking about how to choose a writing system for a language; and (b) when we are talking about such things as frequency counts.

Over the last decade or more, linguists have paid very much of their attention to the syntactic component of language. They have attempted to discover what its nature is, and how it is related to the meaning component and the sound component. As was pointed out earlier, many of the modern **theories of language** differ as to how they see the relationships between the three components. These are very important questions to the linguist. But they are not crucial ones for the literacy worker.

One modern theory of language, however, suggests a point that is very important to the literacy worker: **is the phoneme real?** This theory of language insists that the traditionally recognized phoneme does not exist. This, of course, has very strong importance for literacy. For alphabetic writing depends on the use of visual symbols for the traditional type of phoneme. If there is no such thing as the phoneme, then the use of alphabetic writing itself becomes questionable. This problem is discussed in more detail later in the book.

QUESTIONS

1. *Some people suggest that dogs have one bark that means 'anger', one bark that means 'fear', one bark that means 'welcome'. How would such a dog language be different from human language?*
2. *Have you argued with someone about whether a particular colour is green or blue? How could such an argument happen? Is there any way that you could prove you were right in such an argument? Is it possible to be right in such an argument?*
3. *In English the first sound in 'kick' is part of the /k/ phoneme. The first sound in 'cut' is also part of the /k/ phoneme. (Do not be confused by the difference in spelling.) But the /k/ in 'kick' is pronounced farther forward in the mouth than the /k/ in 'cut'. In Arabic a /k/ pronounced forward in the mouth is part of one phoneme; and a /k/ pronounced farther back in the mouth is part of a second phoneme. Question: Is there a /k/ phoneme that is the same for all languages? Or does each language define its own phonemes such as /k/?*

   Answer: Phonemes exist only in terms of a single language. There are no universal phonemes. An English /k/ is a different thing from an Arabic /k/, which is a different thing from a French /k/, which is a different thing from a Kikuyu /k/, etc.

Language change

Chapter 2—What linguistics is all about: What this chapter is about; Theoretical linguistics; LANGUAGE CHANGE; Dialectology; Socio-linguistics; Psycho-linguistics.

All languages are constantly changing. Although this is a simple statement to make, many people believe otherwise. Many people think that, if there is no outside contact or if no-one deliberately does something to change the situation, the language will stay as it is. But this is not at all true. All languages everywhere are constantly changing.

Even if the people speaking a language are living completely apart, from all others, there is going to be change in all components of the language. Over a period of time the sounds will change. It is, therefore, rather useless for any group of people to try to prevent change in a language.

The amount of change can become large when there are several language groups in close contact with each other, for individual language groups will always affect each other if there is close contact.

Perhaps the most frequent change to take place is **change in vocabulary.** This happens most frequently by means of adding vocabulary. If language group A has something that language group B does not have, and if language group B sees it and wants it, and if language group B takes the thing, it will often have to add a word or a set of meanings to its language. More than likely it will borrow the word of the original language group A. It will probably change the word to fit its own sound system. For this reason, the words related to modern technology tend to be comparable in languages throughout the world, for technology is easily borrowed.

But it is not only through words for technological items that change in the meaning system of languages comes about. New ideas, new divisions of meaning, new approaches to old ways of thinking can be brought about by contact with another language group. We will discuss this change in meaning systems when we discuss literacy in relation to change.

In addition, languages in close contact with each other can affect each other's phonology. One of the most striking historical examples of **sound change** is the adoption of click sounds into Zulu, Xhosa and other languages of southern Africa. These languages originally had no clicks, but the languages of their Bushman and Hottentot neighbours did. As there began to be more and more contact with Bushmen and Hottentots, clicks were borrowed. Today the Zulu language has many clicks which are used as regular consonant sounds. And they were all borrowed over a relatively short space of time from neighbouring Bushmen and Hottentot peoples.

Even the syntactic component of language will change under close contact with other language groups. However, **syntactic change** is probably slower to take place in speech than simple vocabulary changes or phonological changes. Changes in syntax are perhaps not so slow in written language as they are in spoken language. In this instance spoken language is more conservative than written language. Thus, when people become aware of the written literature of another language group, they often deliberately introduce similar types of syntactic constructions into their own written language. As a result languages that have been written for quite a long time have often borrowed syntactic devices that are not normally used in spoken language.

Thus, one can say that, where there is contact between people speaking different languages, there is going to be some **mutual influence** on the languages. At times the influence tends to be mostly one-directional. This is particularly true when there is one language which is a prestige language, for speakers of other languages tend to copy deliberately elements from the prestige language. And people from the prestige language group might try to keep elements from the other languages out of their own language. But if there is close contact, there will be some mutual influence.

There is, therefore, no such thing as a 'pure' language where there is any degree of social contact between peoples.

Programmes designed to maintain **language purity** are probably much more successful in the written language than they are in the spoken language. For in the written language censors or other groups of people can read what has been communicated without difficulty and they can object more easily than in the widely used spoken language.

QUESTIONS

1. *Spanish in most South American countries is spoken side by side with various Indian languages: (a) Do you think the Indian languages have had any effect on Spanish spoken in South America? (b) Would you guess that Indian languages have borrowed words from Spanish? (c) Do you think you could plan a programme which would keep the Indian languages from borrowing Spanish words?*

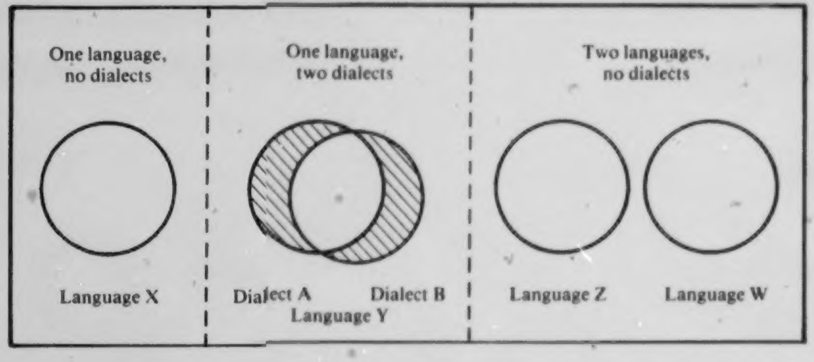
2. *Suppose you were trying to get people to change one part of their language. Which of the following do you think would be easiest to do? (a) Get them to add the phoneme /p/; (b) Get them to change the way they make plurals of nouns; (c) Get them to change the word for 'mother'; (d) Get them to add a word for a new machine that would make life easier for them.*

Dialectology

Chapter 2—What linguistics is all about: What this chapter is about; Theoretical linguistics; Language change; DIALECTOLOGY; Socio-linguistics; Psycho-linguistics.

Dialects are different forms of a common language that can be mutually understood by speakers of the different forms. Dialects tend to develop whenever people who speak a language become separated from each other. The language tends to develop different forms because it is developing in a different way among the separated peoples. If they have been separated for a long time, these dialects may become so different that they cannot be mutually understood. When this happens, we say that the people are speaking separate languages, not just separate dialects. Figure 1 shows three possible situations.

FIGURE 1. *Language and dialects*


One language, no dialects
Language X
One language, two dialects
Dialect A
Dialect B
Language Y
Two languages, no dialects
Language Z
Language W

In the first situation there is only one language without dialect differences. In the second situation there are some differences between dialects A and B (the shaded portions are different). But there are enough similarities for the people to understand each other. In the third situation there are two separate languages.

At other times the situation can be more complex. Let us think of five dialects A, B, C, D and E. Speakers of dialect A can understand speakers of dialect B who can understand both A and C. Speakers of C can understand B and D. Speakers of D can understand C and E. But speakers of E *cannot* understand A. In situations of this type, it is not always easy to distinguish between two separate dialects and two separate languages.

There are three facts about dialects that we will look at. First of all, dialects tend to develop where there are geographical or social boundaries. For example, a river which is deep and wide might separate people on each side. As a result different dialects will probably grow up on the two different sides of the river, creating a **dialect boundary.** Or a mountain, or a series of mountains,might divide people. In the same way social boundaries can divide people and cause dialects to grow up. Particularly important are national boundaries; for it is often difficult to move back and forth across international boundaries. Where there are no such boundaries, it is usually easy for people to communicate with each other. When this takes place, dialects are slower to develop.

The second point is that social centres such as cities tend to develop dialects which are understood by large numbers of people. For example, the dialect spoken in a large town will often be understood by many people in a surrounding area. This is true even when the people in the town may not be able to understand all the neighbouring dialects. Wherever people come together in large numbers—for trade, for markets, for religious reasons—the dialects of that area tend to take on a special importance. They often become the basis for standardized or written language and are therefore considered as **dialect centres.**

A very clear example of such dialect centres is the **dialect situation in Japan.** The standard form of Japanese is based on the language which is spoken by middle-class and upper-class people in Tokyo, the capital and major city of commerce. But outside this standard language, the dialect which is best understood by a majority of people is the dialect of Kyoto. Kyoto is the former capital and was an area of tremendous social influence in the past. On a regional basis, the dialects which are most easily understood throughout Japan are those in a broad area in which industry, communications, transportation and commerce are most developed in the country.

But one other factor is extremely important about the Japanese situation. People indicate that the reason they can understand Kyoto dialect well is that the Kyoto dialect is often used on radio and television. Even people who live far away from the Kyoto area can understand the Kyoto dialect better than other dialects closer to home. Thus, in the modern world the centre of communication is not necessarily the place where people come together. It is often the place from which communication is sent out—by mass communication media such as radio and television.

A third point of importance is that different dialects often have value judgements given to them. A certain dialect might be considered superior or inferior. This is especially true when a dialect differs a great amount from the written language. Often speakers of a particular dialect feel inferior about their own speech. In such cases the people may think that their own language is too ridiculous or too inferior to be written. Dealing with this feeling of inferiority can become a major concern of a literacy programme. Helping people to overcome such feelings of inferiority can therefore be a major development aspect of some literacy programmes.

QUESTIONS

1. *In western Botswana people who speak Tswana and Herero live close together. Tswana and Herero are related language forms. Speakers of Herero cannot understand Tswana without learning it. Do you think Tswana and Herero are dialects of the same language or separate languages?*
2. *In southern Angola people who speak Evale and Kafima live close together. Evale and Kafima are related language forms. Speakers of Evale can understand Kafima without learning it. And speakers of Kafima can understand Evale without learning it. Do you think Evale and Kafima are dialects of the same language or separate languages?*

Socio-linguistics

Chapter 2—What linguistics is all about: What this chapter is about: Theoretical linguistics; Language change; Dialectology; SOCIO-LINGUISTICS; Psycho-linguistics.

Socio-linguistics is concerned with understanding the place that language has within society. It is not just concerned with the language itself, but with how language is used by people within a human grouping.

One of the first things that becomes clear about language from this viewpoint is that languages are and can be used to bind groups of people together. And they can be used to separate outsiders from the group. This has been historically true. Many human groups in the past have limited themselves to the people who speak a particular language or dialect. This is so true that a language is often given the name of the group of people who speak it. And it is often accepted in human society that a person can never really become a part of the group unless he can speak the language of the group. It is also very frequent in human society that one begins to accept an outsider as part of the group when he becomes very fluent in speaking the language of the group. Then one can say of him, 'He is really one of us. He speaks our language.'

On the other hand, **language can be used to exclude people.** Thus, one can say of an outsider, 'He doesn't speak our language. He is not one of us.' In fact, people sometimes make deliberate use of language to keep others outside the group. Special vocabulary can grow up which is deliberately used so that it will not be understood by outsiders. This can become the slang or jargon of a particular group. Sometimes it becomes a highly specialized language such as the ritual language of religion. Even scientific language can be used as an 'in-group' language. It can let the outsider know that he does not know enough to take part in the group. It is easy for a small group of people who are intimately related to develop their own way of talking which can successfully keep others apart.

Even where there is a common language among people, it is fairly frequent that there are different forms of the language which are used in different situations. There is greater likelihood of special forms of language in large complex societies and in societies where social relationships are quite formal. Some of the different situations in which different language forms are used are described below. Of course, not all of these differences exist in all societies. And there are other ways of grouping these different forms than the ones given.

1. One of the most frequent differences in language situations is that between the **formal and the informal situation.** In general, the formal situation tends to take on a slower form of speech. Even if there are not many other differences, formal speech tends to be very carefully pronounced. Thus, sound rules which might exist for rapid speech often do not hold for formal speech. As a result the informal and formal languages often differ in phonology. Differences between informal and formal speech are particularly great where the language has been written for a long time. Then the written form of language tends to become the more formal type of language. Even formal

spoken language becomes patterned to some degree upon it. The longer a language has been written, the greater the likelihood of specialized forms in formal writing and speech.

2. In societies where there is great division among social groups, there tend to develop social group distinctions in language use. In such societies the form of speech which a person uses is often a very clear indicator of his **social position**—or at least the social position into which he was born and grew up. Such divisions of language can become so rigid that it becomes impossible in some situations for a person to move freely in society. Societies which are attempting to remove social class distinctions often find it necessary deliberately to remove some of the social distinctions of language. For example, some societies have developed formal ways of addressing a person of higher social status and specific ways of addressing persons of lower social status. In attempting to remove these social differences, a society will frequently do away with the two or more different forms of address. A common form of address will be adopted which is used by and for everyone. For example, in Tanzania today *Ndugu* is such a common form of address.
3. Very often there are divisions between **public and private speech.** This can be closely related to divisions between formal and informal speech. The way one talks within one's home family grouping is not necessarily the way one speaks in public. In complex social systems, people become very skilful at switching from private speech used at home to public speech used when meeting business or work companions.
4. There are frequently distinctions in language with people of **different ages.** This sometimes tends to be used as a group separating device. For example, the young may develop vocabulary of their own which is difficult for older people to understand. On the other hand, older people may make use of language which is no longer used among the young and which is difficult for the young to understand.
5. **Sex differences** in the use of language have developed in many societies. There are often words which people of one sex may not speak in the company of the other sex. Or there may be topics of conversation which members of one sex may not talk about in the presence of the other sex. It is common that the language used in sexually mixed company becomes more formal than the language used in groups of only one sex. In societies where older patterns of sexual division are breaking down, it is common that some of these divisions of language are deliberately broken down as well. It is highly unlikely that a society

will attempt to break down older divisions of sex if the language sexual divisions are maintained.

There are various names which have been given to all these social language differences. The most common term is **social dialects.** One important feature of these social language differences is the ability of people to switch back and forth from one language form to another according to the proper social situation. A person learns to switch automatically from formal to informal language, or from private to public, etc. There are individuals who lack this ability to switch easily. They tend to become disadvantaged in many social situations. It is certainly true that in learning to speak another language, it is important to learn the social language changes and the different situations in which the changes take place.

QUESTIONS

1. *How many people have you spoken to today? Have you used formal language with all of these people? Have you used informal language with any of these people? Have you spoken to any children? What kind of language did you use with them?*
2. *Have you made a formal speech in the last six months? What kind of language did you use?*
3. *Imagine that the building in which you are sitting has caught fire. You are the first to notice and you want to warn people. What kind of language will you use? Will you write a speech and read it aloud? Will you worry about your pronunciation? Will you try to make your warning sound poetic?*

Psycho-linguistics

Chapter 2—What linguistics is all about: What this chapter is about; Theoretical linguistics; Language change; Dialectology; Socio-linguistics; PSYCHO-LINGUISTICS.

Psycho-linguistics is concerned with the relationship between language and psychology. Although there are a number of psycho-linguistic questions, there is one that seems most important to the literacy worker, that is the question of how languages are learned. Many psycho-linguists are devoting most of their time to the question of **how children learn language.** In particular, they are studying how children learn their first or home language. This is not the question which is most important to the literacy worker. For the literacy worker is normally dealing with adults who have already learned to speak at least one language. But literacy is closely related to the learning of a language (even if this is limited to learning to read a language) and we, therefore, need to look at how language-learning takes place. We will not go into any detail here. A **whole chapter later in this book is devoted to the question of language-**learning as it relates to literacy programmes. This will include both literacy as language-learning and literacy in a second language.

QUESTION

1. *Do you think there is much difference between learning to read a language and learning to speak a language?*

CHAPTER THREE

Choosing the language for literacy

How to use this book; What linguistics is all about; CHOOSING THE LANGUAGE FOR LITERACY; Developing a written language; Producing literacy materials; **Literacy and change; Linguistics and communication; Special problems in literacy: Literacy and language-learning.**

What this chapter is about

Sometimes literacy programmes are being carried out where there are only a few spoken languages and where official languages for literacy and higher education have been clearly established. But sometimes things are not so clear as this. Then, literacy workers must decide which languages should be used as languages of literacy. At times there are official languages for use in higher education. But those languages are not always well known to illiterate adults. When this happens, it is often necessary to do basic literacy in one particular language. Then later, people are taught the language which is the medium of instruction in higher education. At other times, literacy may be taught in an 'unofficial' language before going to the official language of literacy.

Some years ago it was often agreed that only official languages should be used in literacy programmes. Today more and more people are beginning to think differently. Some people think that home language literacy might be best, even when the home language is not widely used in the nation.

This chapter is about making a decision as to which language or dialect to use in a literacy programme. It looks at the question from a linguistic viewpoint. Of course, the choice of the language of literacy is also a political matter. However, good linguistics might contribute to good politics.

The chapter is concerned with two major areas; (a) the dialectology of choosing a language; and (b) the socio-linguistics of choosing a language. A set of guidelines is also given.

The dialectology of choosing a language

Chapter 3—Choosing the language for literacy: What this chapter is about; THE DIALECTOLOGY OF CHOOSING A LANGUAGE; The socio-linguistics of choosing a language; Guidelines.

(Before you go farther: Do you remember what dialectology means? If not, go back and review the section on it in the previous chapter.)

Suppose that you are planning a literacy programme in the imaginary nation of Osowo. Osowo has a number of different languages and dialects. You must advise which of these to conduct literacy classes in. The decision you will make will play an important role in the future of your nation. How will you make your decision?

Of course, you will remember that there are many things to consider before making the decision. Some of these things are of a social or political nature and are not linguistic at all. But there are linguistic facts to consider. We will examine these below.

The first thing you will want to do is make a **language inventory.** You will find out what the language situation is. In some countries this may be a task that has already been done by universities, government departments, etc. But it is very possible that you will have to arrange for the work to be carried out. Even when some work has already been done, you will have to examine it to see if it fits your needs. Here are some of the things you will want to know.

What languages and dialects are normally used in the country?

You will remember that if two language forms are mutually understandable, they are normally called dialects of a common language. Unfortunately, it is not always possible to make an easy decision about this. One can ask the question, 'How well do the people have to understand each other before the two forms are accepted as mutually intelligible?'

There are other problems in distinguishing between dialects and languages. One problem arises when people of one form of language can understand the second form better than the people who speak the second form can understand the first. This is called **unequal understanding** and can happen when the sound rules of one form are easier than the sound rules of the other. The person speaking the language form with the different rules can understand the easier rules of the other. But the one with the simpler rules may not be able to understand the one with the more difficult rules.

Also there arises a socio-linguistic problem when speakers of one form of language **claim that they cannot understand** the speakers of another form. But there may be evidence to the contrary. For example, many speakers of Herero claim that they cannot understand speakers of Ambo. Yet some other speakers of Herero say they can easily understand Ambo; and that speakers of Ambo can understand Herero. The question here is, 'Are Herero and Ambo the same language or are they two different languages?'

At times the person making the inventory must make rather arbitrary decisions in answering questions like this. In deciding questions like this, it is probably best to accept what speakers of the language say is true. This may not be the answer that the formal linguist would choose. But, for the practical worker, socio-linguistic facts are as real as more formal structural facts.

The making of a language inventory includes, among other things, the making of a **language map.** If you have to make a decision for the nation of Osowo, you will need to have a map of Osowo which indicates where the different dialects and languages are spoken.

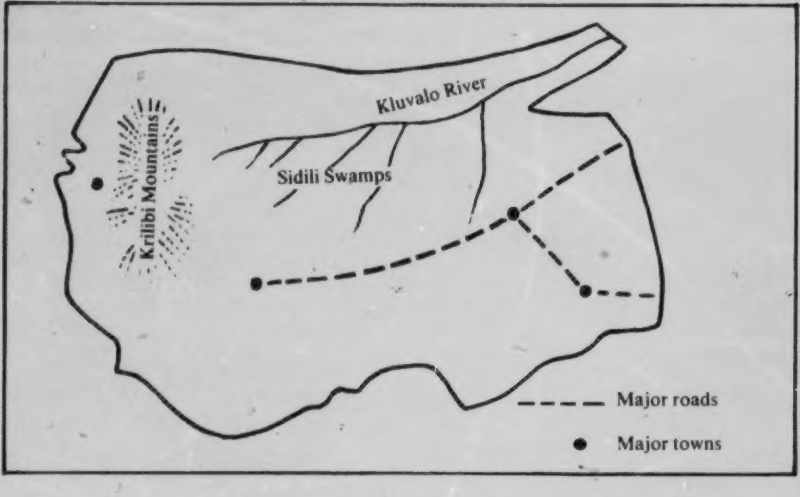
You will remember that often geographical features such as mountains or rivers form **dialect boundaries.** Look for such geographical separation points on the map of your country. They will help you in the initial stages of making a language map.

You will also remember that places where people gather are often **dialect centres.** Look for large towns, market places and the road network on your map. They will also help you in the initial stages.

Thus, in making a language inventory, you might want to fill in two things on your map: (a) those geographical features which are separating the languages and dialects; and (b) those features which will increase language contact between people. Look at the map of Osowo in Figure 2.

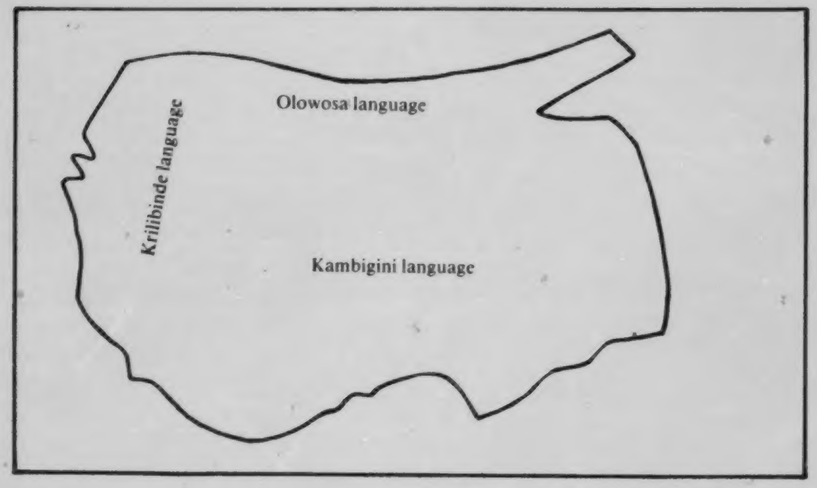
The Kluvalo River in the north ends in a number of small streams in the Sidili Swamps. In the west of the country are the Krilibi Mountains. The population of the country is scattered into small farming villages. There are only four major towns and good roads are limited. Now look at the language map of Osowo in Figure 3.

FIGURE 2. *The imaginary country of Osowo*



Can you guess where the three main languages have geographical boundaries? Where do you think the major dialect of the Kambigini language might be? Do you think the Krilibinde language will have a number of dialects?

FIGURE 3. *Language map of Osowo*



QUESTIONS

1. *Can you make a map of all the languages and dialects in your country?*
2. *What geographical features (rivers, mountains, swamps, deserts, etc.) are there in your country which divide languages or dialects?*
3. *What towns, cities, market places, etc., are there in your country which are language centres?*
4. *What are the languages or dialects used on radio and television in your country?*

The socio-linguistics of choosing a language

Chapter 3—Choosing the language for literacy: What this chapter is about; The dialectology of choosing a language; THE SOCIO-LINGUISTICS OF CHOOSING A LANGUAGE; Guidelines.

(Before you go farther: Do you remember what socio-linguistics is? If not, go back and review the relevant section in the previous chapter.)

After you have made a geographical language map as part of your language inventory, you will want to make a **social language map** as well. In a social language map, you chart out the different uses of a dialect or language. Recently, linguists have used some of the following types of classifications in social language mapping—but different linguists use different divisions and terms. There is no reason to be unduly concerned about terminology.

First of all one can divide the languages by **importance,** that is, into major languages of the country, minor languages of the country, or specialized languages of the country. If it is a major language, it will be used: (a) by a large percentage of people over a wide area; or (b) for very important social situations within the nation. A minor language will be used: (a) by a small group of people; or (b) for relatively small and comparatively unimportant parts of the nation's activities. A specialized language will be a language used in a very limited situation, although this might be an important situation. Thus, there might be a special language for religion, or a special language for education, or a special language for rituals that are important in the nation.

A second way of dividing the languages on the social scale is to divide them into standard languages, vernacular languages and classical languages. There are several different definitions of standard, vernacular and classical languages. But for our purposes the following definitions are sufficient. A **standard language** is one which is written and has an accepted, established form of writing. A **vernacular language** is one which has no standard written form even though there may have been some attempts at writing it. A **classical language** is one which is widely written by the educated, has been written for a long time, but is not spoken in normal home situations. It is, thus, usually an especially learned language. It is often used on official occasions, but it is not usually the language that people would speak within the intimacy of their own households.

There are **other ways of describing a language.** One can state whether it is: (a) an official language; (b) an international language; (c) a lingua franca for trading purposes or for contact over a large area; (d) a language which is used in schools; or (e) whether it is a language which marks off a special group of people from all others. It can be noted: (f) whether it is widely used for mass communications; or (g) whether it is a special literary language, etc.

In making this map of social language usage, one first has the list of languages and dialects that has been found from the geographical mapping. Then one assigns categories to these languages according to their social usage. Is it a major language? If so, is it a vernacular one, a classical one, a standard one? Is it used in education? And so on.

One must be very careful of **two hazards,** however. One should not simply accept the first geographical classification as a final basis for the social classification. For it is very possible to miss many of the specialized language forms—particularly the many forms that are used in large cities. And as a second warning, one must be careful not to omit the unwritten vernaculars which are spoken by people at home. Those same people might speak a standardized language or classical language in public.

This last item is of some importance and I would like to go a bit more into detail about it. Many nations have what the linguist Charles Ferguson calls a **'High' form** and a **'Low' form** of language.

The High form is one which would be used in most public situations. These are occasions such as political or religious situations, or literary activities. And the Low form would be used in more private situations, perhaps conversations within a family or instructions to a servant. The Low form is normally learned at home and the High form is learned in schools. The High form has an established orthography; it is a standard language. The Low form does not have an established orthography; it is a vernacular.

The High and Low forms can exist in complex situations. For example, in Bengali there are a number of Low spoken dialects, usually referred to according to geographical region: Rádhí, Bárendra, Kámrúpí and Banga.

There is a High language, Sádhu Bhásá, which is used primarily for prose writing. It is rarely spoken. In addition, there is a Semi-High spoken prestige dialect, Calit Bhásá, based on certain Calcutta speech. There is also a second Semi-High written form, Likhita Calit Bhásá for prose. And there is a third written form (High), Kabitár Bhásá, which is used for writing poetry.

In general, there is a distinction between a High form of language and a Low form: (a) when there has been a long period of written language; (b) when the written language is used over a wide geographical area; and (c) when, for religious or other reasons, the written language is not allowed to change.

QUESTIONS

1. *What languages are already written in your country?*
2. *Are there any High and Low forms of language in your country?*
3. *Can everyone in your country speak the official language?*
4. *What language is spoken in children's schools in your country?*

Guidelines

Chapter 3—Choosing the language for literacy: What this chapter is about; The dialectology of choosing a language; The socio-linguistics of choosing a language; GUIDELINES.

Once you have made a language inventory of your country, then you may decide which language to use. How are you going to make this decision? Some of the factors involved in making the choice will be linguistic ones. Here are some guidelines in making a choice.

As a general guideline, **it is much easier to learn to read one's own language** (that is, a language which one speaks easily and fluently) than it is to learn to read a language of which one has a limited knowledge. If this were the only factor, it would be likely that learning will be more effective when a person learns to read his own spoken language. It does not matter if this is a vernacular, an international language, or whatever. Usually, this language will be the home language that was learned as a child. It is usually not suitable to use a trade language or a lingua franca in the belief that everyone speaks it well. Often language ability in a lingua franca is very limited.

In addition to being easier to learn, **the home language is usually more relevant** to a person's day-to-day life—his normal activities, his way of thinking. Thus, from a learning viewpoint, one might choose to have literacy instruction in a large number of dialects or languages spoken throughout the country. There is increasing interest throughout the world in teaching literacy in the home language.

But there are some **practical considerations** that may make literacy instruction in a large number of home languages difficult for a country. They are practical problems, not primarily learning problems.

First of all, it can be a **very expensive** proposition to teach literacy in a large number of languages. Some countries may have ten, twelve, fourteen or more different spoken dialects or languages. The cost of writing books, training teachers and conducting literacy programmes in each of these languages can be overwhelming. And when one is looking at expense, one must look not only at the initial expense but at the long-range cost of such a programme. One must ask whether the size of the group that speaks the language will ever be large enough to support a written literature. It is one thing to provide the initial expense for literature in a literacy programme; it is another thing to think of a continuing financial subsidy for many years. It is doubtful if groups of limited size will ever be able to support a reading literature. As a result, all reading matter will have to be subsidized perpetually or become the property of an élite.

If the group is fairly small in size, there is the additional problem that the literature produced might be **artificial.** For every piece of literature is likely to be produced specifically for the literacy programme. As a result the amount which will be available may always be small. And it may be very limited in its content.

Another drawback to the choice of literacy in a large number of spoken languages of a country is that the people themselves might display **resistance to learning literacy in the home language.** If there is a widely used standard language, it may well be that this is the language the people want to learn to read. They may be very hesitant to limit their reading skills to a small localized language. For example, in one small literacy programme that I knew of, there were classes in three non-official home languages and one official international language. There was a total of 14 students in the home language classes. There were 565 in the official language classes. The preparation of the literacy materials for the home language classes took three years. The preparation for the international language took nine months. Situations such as these must be taken into account when a choice of language is made.

There is a final difficulty with the choice of literacy in many small languages. Many governments believe that they can help unite a nation by providing a language common to all in the nation. If the government is trying to unite a people by means of a common language, the use of a number of small group languages for literacy might be seen as retarding the move towards unification. Such decisions are often made at a high level of authority. Perhaps the literacy worker will not have the **final decision.**

There are definite difficulties involved in producing literacy programmes in a large number of dialects or languages. As a result, two compromise situations tend to take place. The first is fairly widespread. Initial literacy instruction is given in a number of home languages. And then people are taught to speak and to read the official language. Home language literacy is seen as only a beginning step—**a bridge**—in making people literate in the official language. Thus, the expense of continuing literature programmes in many home languages is done away with. This solution will be dealt with in some detail later in this book.

The second compromise situation has taken place where there are a large number of dialects of the same language. In some places people have produced **union languages.** The union language is an invented, written language with a common base from all the dialects. The base is chosen so that speakers of all the dialects can understand what is being written. Yet the language is not one which is actually spoken by any one group of people. One of the best known union languages is written Shona of Zimbabwe. Many of the large international written languages are, in fact, types of union languages—forms common to all the spoken dialects are written, and no-one actually speaks the language exactly as it is written.

Although a few planned union languages have been successful, there have been a number of unsuccessful ones. In my opinion, a union language should be seen as a last resort in choosing a language for literacy. It should not be attempted without the help and guidance of a professional linguist.

QUESTIONS

1. *Do you think people would resist learning to read in a home language as opposed to the official language in your country?*
2. *What would be the expense of having a literacy programme in all the spoken languages of your country?*

3. *What percentage of the people in your country know the official language well enough to begin literacy instruction in it rather than in the home language?*

CHAPTER FOUR

Developing a written language

How to use this book; What linguistics is all about; Choosing the language for literacy; DEVELOPING A WRITTEN LANGUAGE; Producing literacy materials; Literacy and change; Linguistics and communication; Special problems in literacy; **Literacy and language-learning.**

What this chapter is about

This chapter is written mainly for those people who might have to develop a written language. But *it is also intended for anyone who has to be involved in the writing side of a literacy programme.* Therefore, we advise that everyone read this chapter carefully—even if they are not going to be developing a written form of language. Some of the ideas presented are crucial for understanding the nature of written language.

The chapter begins with a discussion of the differences between written language and spoken language. It points out how different types of writing systems are related to spoken language in a different way. This information will be important later in the book when we are looking at learning to read as opposed to learning to speak a language.

Next, we will look at how recently written languages have developed. Even when orthographies have been used for a century or more, it is often necessary to make changes in them. If you understand how writing systems have developed, you will have a better understanding about changes that you might need to make in the orthography as part of your literacy work.

Then, some particular problems in orthography systems are discussed. This part of the chapter might be of interest to only some of the readers. If it does not seem to concern you, you might read it very quickly. The section ends with some guidelines on choosing an orthography system.

This is for people who still need to choose such a system.

Developing a writing system is not a purely linguistic problem. There are socio-linguistic points to think about. Some of these are discussed at the end of the chapter.

Written language vs. spoken language

Chapter 4—Developing a written language: What this chapter is about; WRITTEN LANGUAGE VS. SPOKEN LANGUAGE; How recently-written languages have developed; Particular problems in orthography systems; The socio-linguistics of choosing an orthography.

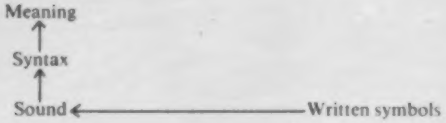
There are many **similarities** between a written language and a spoken language. A spoken language makes use of sounds to convey meaning. A written language does much the same thing. But it makes use of visual symbols to convey meaning as is shown in the following two diagrams:

SPOKEN LANGUAGE	WRITTEN LANGUAGE
Meaning	Meaning
↕	↕
Syntax	Syntax
↕	↕
Sound	Written symbols

For the most part, the meaning system of spoken language and written language is the same. And, to a large degree, the syntax of a written language and a spoken language is the same; however, there are certainly important differences in syntax at times. Yet it is most obviously in the area of sound and visual symbols that written language differs from spoken language.

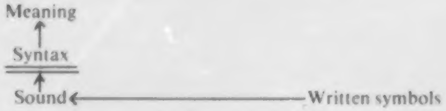
For many years linguists pointed out that the basic factor in teaching a person to read a language he can already speak is teaching him to relate visual symbols or graphemes with the sound symbols of spoken language. Literacy programmes for many years concentrated on: (a) determining what the sounds of a language are; (b) deciding what graphic symbols can be used to portray those sounds in cases where there was not already a writing system developed; and (c) teaching people to relate the sounds to graphic symbols. As you have learned, the sounds that have been identified are usually called the phonemes of the language. And the written symbols have often been called the graphemes. This process is therefore that of **relating phonemes to graphemes.**

From a technical point of view, the work of the linguist in literacy programmes has often been: (a) determining the phonemes of a language; and (b) determining the best way to teach the corresponding graphemes. This view of teaching reading can be seen in the following diagram:

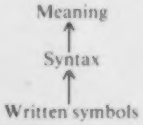


The person learns the graphemes, he learns to relate those graphemes to the phonemes; and from there he automatically relates the phonemes to the syntactic component and then to the meaning component. Thus, in the initial stage, reading is seen as a **four-part process:** grapheme to phoneme to syntax to meaning.

But this approach to reading is not as automatically successful as it might look. For it has frequently been shown that a person must struggle to interpret graphemes in terms of phonemes. Such a person may concentrate so hard on that task that he never goes through and gets the meaning from what he is reading. The route from sound to syntax gets blocked:



It is also very clear that it is possible for people to go directly from grapheme to syntax to meaning. Good readers probably make this shortcut all the time. The situation is shown in the following diagram:



Anyone who has ever learned to read an extinct language might have learned to read the language without ever being able to pronounce it to any degree of fluency.

The four-part process approach to reading discussed above has been based on a phonemic system or what is more commonly called an

alphabetic system. In this approach to reading, each sound has a symbol, or sometimes a sound may be identified with more than one symbol. And usually there are some phonemes that are not written. But despite these incompletions, it is still the individual phoneme which is associated with a grapheme.

A similar approach to reading is a **syllabic** approach. Here the unit of sound which is identified with a grapheme is not a single phoneme but is a combination of phonemes in a special pattern—the syllable.

Writing in this type of system is normally called syllabic writing—as opposed to alphabetic writing. But notice that the theoretical approach is still very similar to that of alphabetic writing. One takes the sound unit and relates it to a visual unit. The basic difference is that the size of the sound unit is different. Syllabic writing only works successfully where the syllable structure of a language is fairly simple.

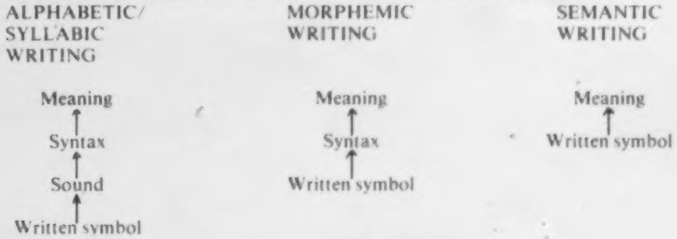
But there are also other ways of writing languages. Some written forms of language do not associate a visual symbol with a sound symbol but, instead, may associate a visual symbol with a unit of the syntactic component. A well-known example is Chinese. Written Chinese relates graphemes to morphemes, hence **morphemic** writing—although the system in Chinese is more complex than this alone. Because there are far more morphemes in a language than there are phonemes, there must be many more graphic symbols in a written language of this type. Thus, Chinese or similar types of writing system make use of hundreds or even thousands of graphic symbols, for there are thousands of morphemes in a language.

There is a third approach to writing a language. It is possible to produce graphic symbols which represent **semantic** units. Although there are no pure semantic writing systems in existence, there have certainly been limited types of semantic writing in the past. Probably all writing systems are derived from earlier ones which attempted to represent meaning directly through graphic symbols. Thus, in old Chinese one symbol could be read as 'sun, day, heat', etc. Such a symbol does not represent a morpheme or word but a semantic unit. Usually, however, a second phonetic element is added. This element lets the reader know if the symbol should be read as 'sun' or 'day' or whatever. Written old Chinese is thus not a pure semantic system.

Many written languages actually make use of semantic writing for a sub-set of their structure. For example, most languages write numbers directly in terms of a graphic representation of a semantic unit. If I write 'eighty-seven' for a number, then I am writing alphabetic writing. If, however, I use 87, I am using a semantic type of writing system. Thus, 87 can be read directly into numerous languages, because the symbols do not represent sounds or even morphemes. They represent semantic units. Even though a majority of written languages make use of alphabetic writing, those same languages make use of a sub-part which is a semantic writing system.

Figure 4 represents the three theoretical approaches to written language. In the alphabetic or syllabic approaches, the graphic symbol represents a sound symbol; it then goes from the sound to syntax to meaning. In a morphemic system, one goes directly from graphic symbol to syntax to meaning. The sound system is omitted. In the semantic system, one goes directly from graphic symbol to meaning.

FIGURE 4. *The three theoretical approaches to written language*



In terms of numbers of languages, the great majority of written languages make use of the alphabetic system. A much smaller number of languages—but languages which are read by a large number of people—make use of the morphemic type. There are no languages which make sole use of the third type—the semantic system. But nearly all writing systems are to some degree combinations of different types of system.

The great majority of new writing systems that are introduced today make use of alphabetic writing. It is generally advisable for anyone preparing a new written language to use some form of alphabetic writing. But then the question arises, '**Which alphabet** do I use?' Various alphabets have been used in different parts of the world. In most cases, the best alphabet to use for a new language is one that is similar to alphabets used for other languages of the area.

In regions of the world where Arabic script is used, one would be advised to use the Arabic alphabet. In parts of the world influenced by India, it might be advisable to use a basic Indic form of alphabet. In South America and sub-Saharan Africa, the Roman alphabet is most frequently used. In all areas of the world there are today some writing traditions; it would be best to keep the alphabet within the basic tradition familiar to the area.

QUESTIONS

1. *Why does it take longer to learn to read and write a written language where the graphemes represent ideas than a written language where the graphemes represent sounds?*
2. *Why is it important to determine all the phonemes of a language before developing an alphabetic writing system for the language?*

How recently-written languages have developed

Chapter 4—Developing a written language: What this chapter is about; Written language vs. spoken language; HOW RECENTLY-WRITTEN LANGUAGES HAVE DEVELOPED; Particular problems in orthography systems; The socio-linguistics of choosing an orthography.

During the last several centuries, quite a number of languages have been written for the first time. These newly-written languages tend to have a writing system based on the model of some other written language. It is highly likely that any literacy worker who writes a language for the first time will make use of another written tradition. He will probably use that tradition as a basis or at least a model for the writing system that he develops. It is therefore useful to look at what frequently happens in the development of writing systems.

For the most part, it would appear that something similar to the following happens. A recently-written language is first produced as an imitation of: (a) a particular spoken language (which I will call the **source language**); and (b) some older written language (which I will call the **resource tradition**).

The imitation of the source language is deliberate and conscious. One is trying to model the written language after a spoken language. The imitation of the resource tradition is usually deliberate—but there is some degree of **unconscious borrowing.** That is, a person writing a language for the first time has deliberately borrowed an old tradition of the alphabet. And he has tried to relate the traditional alphabet to the new language. He is aware of what he is doing. He usually also borrows such things as: (a) the direction of writing (from right to left, from left to right, from top to bottom); (b) punctuation as it exists in the resource tradition; (c) word division; (d) paragraph division or other types of division; (e) capitalization; (f) special handling of vowels (omitting them perhaps); and so on. These last things (punctuation, word division, etc.) have often been borrowed without the people being consciously aware of what they are doing. Thus, they often will deliberately try to make the alphabet fit the source language. But they will almost never try to make such things as punctuation, paragraphing or capitalization fit the needs of that particular language. They usually make these imitate the resource tradition. People writing a language for the first time usually do not stop to question whether there is a better way of doing these things.

The initiators of many of these written languages have often been **non-native speakers** of the source language. Therefore, they have been handicapped by incomplete knowledge of the source language. At the same time, this same fact has helped them for they are often objective in their way of thinking about the language—in a way that native speakers rarely are. The incomplete knowledge of the language has often resulted, certainly at first, in a problem. There are often major differences between the first examples of the written language and the actual source spoken language. The facts that the people producing these languages are objective has been a benefit. For they have not hesitated to rewrite the language. They have made changes in the written language even when native speakers would have been hesitant to make those changes. Thus, one can see that in many of the historical developments of written languages, the early forms of the written languages tend to be less conservative toward change than the spoken languages have been.

Many of the **early written languages have not fitted the spoken languages** very well. Often there have been more vowels in the spoken language than the resource tradition gives symbols for. As a result, several different vowels in the language are sometimes written by a single letter. In addition, there are sometimes phonemes in the language that are particularly hard for a non-native speaker to hear. It is likely that these phonemes will have been left out in the first forms of the written language. There are many occasions when the writing of the spoken source language has been restricted to consonants and vowels—any other part of the sound system of the language tends to be omitted. Thus tones, nasalization, pitch, stress and vowel length have often been neglected.

On the other hand, **direct borrowing** tends to occur in the newly written language for any type of writing units from the resource tradition other than consonants and vowels. For example, many languages have been written for the first time over the last century as imitations of Roman alphabetic resource traditions. When this has happened, the new writing systems have borrowed almost in their entirety such things as capitalization, the meaning of italics, the use of numerals, etc. Often these things have little to do with the spoken language which is supposedly the model for the written language. A good example of how elements from the resource tradition have been kept over in a new writing system is the difference between **capital letters and lower-case letters** in systems based on the traditional Roman system.

Many languages have formal grammatical elements which make it very clear that a person has come to the end of a sentence. And it is equally clear when a person is starting a new sentence. It is rare that such written languages require both punctuation at the end of a sentence and capital letters at the beginning of the next. The Arabic systems and the Indian systems, for example, do not make use of this difference between capital letters and lower-case letters. Yet, in a great majority of the newly-written languages in which Roman-type alphabets have been used, sentences end with punctuation marks and begin with capital letters. There is nothing in the spoken language that requires them. But the people who developed the written language were accustomed to using capital letters, so they went ahead and used them in the newly-written language.

It would appear that in the early stages the written language is based upon a slow **formal style of spoken language.** But the people writing the new language are often not aware of the differences between formal speech and informal speech in the language. Thus, there is often a mixture of informal and formal speech in the new writing. This can make learning to read more difficult.

For example, in a less-formal language the **speech is quicker** so that: (a) there is often elision of vowels (some of them drop away between words); or (b) certain consonants may be omitted; or (c) certain changes take place in tone, stress and pitch. Often, in the early forms of written language some of these changes will be represented; and some of them will not. Thus, there is often quite a mixture between formal and less-formal speech in the early stages of writing.

It is quite usual for the early forms of newly-written languages to change fairly quickly. As people have found out more and more about each language, they have not hesitated to make changes. Often they make these changes without telling anyone that the changes have been made. The way of writing simply changes. These **unplanned changes** can be very confusing both for people who are learning to read and for people who have already learned to read.

There are **four basic problems** in newly-written languages:

1. Non-native speakers of the language have been very much involved in producing the first written forms. These non-native speakers have often had very little linguistic training.
2. People who have produced these written forms have often not

examined how a large part of the resource tradition fits the spoken language. They accept without question most of the resource tradition with which they are most familiar.

3. People producing the written forms of language have been too quick to make changes in a disorderly fashion. Thus, what has been written one year is not necessarily what will be written the next. And no-one knows exactly how something should be written at a given moment. In fact, it appears that the people developing these orthographies have at times forgotten the way they wrote something the previous month or the previous week.
4. In some areas of the world two or more writing systems have been developed for the same language. A good example of this is the Pwo Karen language of the western part of Thailand. Let us look at that situation in more detail.

Three writing forms, based upon two separate resource traditions, were developed for the Pwo Karen language. The two resource traditions were those of Mon and Burmese. All three of the writing systems were alphabetic, but they were developed at different times by different peoples. All three were from religious sources: one of them was by an American mission society; another was by a Burmese monk; and a third by a different Buddhist movement.

The Burmese and Mon writing systems which were used as a basis for the three orthographies were themselves quite similar. For both of them stem from an earlier South Indian model. Thus, the original resource tradition was South Indian, then Mon, then Burmese. But even with these very similar traditions, one of the scripts (that based on the Leke Buddhist movement) is quite different in actual graphic form from the other two written languages. In fact, it is certainly the Leke writing system that is the most original of all three of the scripts. But all three of the systems are sufficiently different from each other to have hampered the spread of literacy in the language. The reading public is not large enough to support three different orthographies.

QUESTIONS

Can you describe the resource tradition(s) most common in your country in terms of the following?

1. *How many resource traditions are used in your nation?*
2. *Is the writing alphabetic?*
3. *If so, which alphabet(s) is (are) used?*
4. *In which direction does one write?*

5. *Are all vowels written?*
6. *Are tones, pitch, nasalization, long vowels written?*
7. *Are punctuation marks used?*
8. *Are there lower-case and upper-case letters?*
9. *Is there division into paragraphs?*
10. *Is there a difference between the printed system and the handwritten system?*
11. *Is there a combination of alphabetic and semantic writing?*
12. *Is there any morphemic writing?*
13. *What else is important about the tradition(s)?*

Particular problems in orthography systems

Chapter 4—Developing a written language: What this chapter is about; Written language vs. spoken language; How recently-written languages have developed; PARTICULAR PROBLEMS IN ORTHOGRAPHY SYSTEMS; The socio-linguistics of choosing an orthography.

As has been mentioned earlier, most orthography systems centre around the writing of consonants and vowels. Some orthography systems limit this even farther. They give great prominence to the writing of consonants. **Vowels** become secondary types of symbol; often vowels in such writing systems are written only when they are needed for understanding; and in some systems, they are left out altogether. This type of system can only exist in languages where it is easy to predict the vowel from other factors. It would not work for all languages. Anyone who is adopting such an alphabet must make certain that it is possible to read the language without stressing the vowels.

A number of languages make a difference in the length of the vowel. **Vowel lengths** are usually measured in what are called 'mora'. The most common length is given the mora of one; double this is a two-mora vowel, etc. These differences in vowel length are often produced in writing by simply rewriting the vowel. Thus a vowel of one mora will have one vowel symbol. If the vowel has two moras, the vowel symbol will simply be reproduced. Other systems will use a mark over the vowel (often a dash) or a special symbol after the vowel. For example, a colon occurring after a vowel means it is a long vowel. From a printing or typing viewpoint, it will probably be easiest to use a double symbol or a symbol after the vowel than to use a mark over the vowel. Thus, the three ways of writing a long 'a' are as follows: double vowel, *aa;* mark over vowel, *ā;* and mark after vowel, *a:*.

Often a language will have a set of oral vowels and a set of nasal vowels.

In oral vowels the air stream comes out of the mouth. In nasal vowels at least part of the air stream comes out of the nose. There are other special types of vowel as well as nasal ones.

When there are several **sub-systems of vowels,** one must decide how to represent the differences. Frequently, a nasal vowel is represented by writing a nasal consonant after the vowel—*an*. Sometimes it is represented by using a special mark over the vowel—*ã*. It is impossible to give a rule as to which is the best approach. The decision has to be made on the basis of the individual language. For example, some languages never have a place where a nasal vowel is contrasted with an oral vowel followed by a nasal consonant. In such cases it will work well to write nasalized vowels as 'vowel+nasal consonant'. But some languages do have a place where these two could contrast. Then it would not work to use a 'vowel+nasal consonant' solution.

Many languages make use of **tone** to distinguish meanings between words. It is certainly true that tone can often be guessed at in the written language. Or it can sometimes be determined by other factors in a sentence. But within some languages the tone must definitely be written. The problem arises as to how tone can best be indicated.

In alphabetic types of writing systems, tone is usually marked in one of two fashions. If there are three or fewer tones, accent marks are often used over vowels to represent two tones; the lack of an accent mark represents the third tone, as follows: high tone, *á;* low tone, *à;* and mid tone, *a*. This is a reasonably efficient system when the number of tones is limited.

In other languages, particularly where there are four tones, there is sometimes the use of numbers over the vowels to represent tone. A sentence might look like this:

$$\overset{1}{\text{a}}\text{ld}\overset{3}{\text{i}}\text{n}\overset{3}{\text{a}} \qquad \text{s}\overset{2}{\text{e}}\text{db}\overset{3}{\text{a}} \qquad \overset{1}{\text{a}}\text{lb}\overset{4}{\text{i}}$$

People's habits vary in the use of the numbers. Some let number one represent the highest tone; some let it represent the lowest tone. Occasionally, special symbols occur after syllables to indicate tone in written languages.

In some languages there is question as to whether the writing system should indicate word division or **morpheme division.** (Before you go farther: Do you remember the difference between a morpheme and a word? If not, go back and review the first section of Chapter 2.) Usually, the question only arises concerning certain morphemes in the language and not all of them. In southern Sotho of Lesotho there seems no question at all that nouns should be written with word division and not morpheme division, for example: according to word division, *mosadi*='woman'; but according to morpheme division, *mo sadi*='noun class 1 singular+adult female'. But the position with verbs is not so clear. Some people believe that there should be word division, while others believe that there should be a system where certain morphemes are written together and others separate. No-one seems to have suggested that all verb morphemes be written separately at all times. Again, according to word division, *ketlareka*='I shall buy'; but according to morpheme division, *ke tla reka*='I subject morpheme+future tense morpheme+buy'.

It is the second—morpheme division—that is actually used in the orthography for verbs. Some argue that this is unscientific and inconsistent with the way nouns are written. Other, similar languages use word division rather than morpheme division. Yet there are sound changes at the morpheme breaks in the verbs in Southern Sotho that do not exist in the nouns. And people appear to find it much easier to read *ke tla reka* than *ketlareka*.

My own studies indicate that Sotho, with its morpheme division, is easier to read than the related language Zulu, where there is word division. Whether word division is better than morpheme will depend on the structure of the individual language.

This is not a complete review and there remain **other special problems** that exist in developing writing systems. But this does serve to show the type of problems that can exist and also serves to indicate that there are no complete rules in developing orthographies. The individual language structure will determine what is linguistically best. Although there are no complete rules, there are **some general guidelines** that will be useful. Here are some that one might consider when producing a written language for the first time:

1. There should be a good linguistic analysis of the sound system of the language. One should know what the phonemes of the language are and what rules change sounds in the language.
2. One should: (a) decide whether to use slow formal speech as the basis or quick informal speech; and (b) know how to recognize the characteristics of formal speech and informal speech in the language.
3. One should choose what basic resource tradition will be used as a model.
4. One should decide what elements of the resource tradition will not be useful and what additions need to be made.
5. One should adapt an alphabet to meet the needs of the sound system.
6. All of the above are only the preliminaries to getting a good idea of the linguistic picture. But the linguistic situation is not necessarily the

> overriding one. There are other considerations: (a) one should determine what existing writing system has **prestige** among the people. That is, what kind of writing system are readers most likely to want? This is, in fact, the true basis for choosing a resource tradition; (b) one must look at the effect of the orthography chosen on the **expense** of writing. If it is going to be extremely expensive to put things into print, the development of a large written literature will be hindered; and (c) one must look at how difficult the writing system will be to learn. For example, one may have decided that it will be necessary to indicate tone. A complicated system of writing tone and tonal changes may be developed which might represent the spoken language very well. But it could also be much **too complicated** for a person to read easily.

Socio-linguistic questions such as these are so important that we will look at them in more detail.

The socio-linguistics of choosing an orthography

Chapter 4—Developing a written language: What this chapter is about; Written language vs. spoken language; How recently-written languages have developed; Particular problems in orthography systems; THE SOCIO-LINGUISTICS OF CHOOSING AN ORTHOGRAPHY.

It is very important to choose a writing system that fits the spoken language well. But, as was said above, that is not the only basis for choosing an orthography. There are socio-linguistic factors to be considered as well.

First and most important is the question, '**What kind of orthography do the people themselves expect and want?**' This question will probably be answered by the answers to the following two questions. The first is, 'What is the most common orthography system of the area?' If it is an Indian-based alphabet, then most likely the people are expecting an Indian-based alphabet. If it is a Cyrillic alphabet, people are probably expecting a Cyrillic alphabet. People will normally expect their writing to look like the writing they have seen in other languages of the area.

The second question is, 'What is the most prestigious orthography system of the area? Sometimes an area will have several different written languages which are written in different orthography systems. For example, the written form of some of the languages of Polynesia is derived from a South Indian alphabet, while other languages of the area are written with the Roman alphabet. Any person choosing a writing system for Polynesia must decide which of these traditions is the one with most prestige in his particular area.

Another factor which is closely related to the above is whether there are any **regional agreements** with other countries in the same area about orthography systems. For example, several times in the past, West African nations have come together to try to decide upon a common approach to orthography systems. They have made some agreements concerning new orthographies for West African languages. Any person who is preparing a writing system for any languages of the area should know what has been decided at such conferences. This is not only true for West Africa. Often there have been government, church or other organizational agreements on new writing systems. The literacy worker must try to observe these as much as possible.

There are several advantages to be gained by following regional agreements. One is that a common approach to orthographies will make it easier for people **to learn to read other languages** of the area. If the same basic type of writing system is used, it is much quicker to learn to read a new language. This is particularly true with closely related languages.

An equally important question is the **ease of learning** of the orthography. If all the symbols look very much alike, it will be difficult to distinguish them. If there are many diacritic symbols, the language becomes difficult to read. If symbols are used to represent sounds quite different from those represented by the same symbols in other languages, it will make reading the language difficult for some people. For example, I once suggested the use of the letter Y to represent certain vowels in the Nama Hottentot language. The people producing the orthography told me that Y was often used in other languages of the area to represent consonant sounds. They believed it would cause problems if Y were used to represent vowel sounds in Nama. This may have been an accurate observation or it may not have been, but certainly it was a point that should have been raised.

And finally one should ask the following questions concerning the **ease and expense of printing** for a new orthography system: 'How easy and inexpensive will printing in the new system be?' 'Can the new system be easily and inexpensively adapted to a typewriter?' 'Are there so many symbols that printing will become an extremely expensive, difficult or inefficient operation?'

It would certainly be helpful if the new orthography could be easily adapted to use with a typewriter keyboard. The same is, of course, true in relation to a printing press. One must ask how easily and how inexpensively the language can be set in type. Printing is an extremely expensive operation. And it is becoming more and more expensive. It is not likely that a widespread literature will develop if the expense becomes too great.

The literacy worker may find that the linguistic decisions concerning a new orthography require the services of a professional linguist. But often it is the non-linguist, frequently an administrator, who should make the final decision about the acceptability of an orthography system. The linguist can decide if it fits the spoken language. Then, someone else must decide what orthography system the people expect and want. It is often an **administrator's task** to decide: (a) what the relative cost will be for producing the written symbols; (b) whether the written symbols will be useful for learning other languages of the area; and (c) whether there are agreements with other nations of the area. The literacy worker should not hesitate to point these things out to any professional linguist who has neglected them in developing a writing system.

QUESTIONS

1. (a) *Are there any international agreements in your area concerning new orthography systems?* (b) *If you do not know the answer to this question, how could you find out?*
2. (a) *Do you know what kind of orthography system the people of your nation will want in a newly-written language?* (b) *If you do not know the answer to this question, how could you find out?*

CHAPTER FIVE

Producing literacy materials

How to use this book; What linguistics is all about; Choosing the language for literacy; Developing a written language; PRODUCING LITERACY MATERIALS; Literacy and change; Linguistics and communication; Special problems in literacy; **Literacy and language-learning.**

What this chapter is about

Some of the most helpful advice that linguists can give to people involved in literacy programmes is in the field of producing literacy materials. In the preceding chapter we looked at the development of a writing system. This was mostly involved with the sound side of language.

But when one gets to actually producing literacy materials, the syntactic and semantic areas of language are also closely involved. Certainly, there is still structure in terms of the sound system. Frequently, linguists or people producing literacy materials give all of their attention to the sound system of the language. But this should not be the case. The syntactic and semantic areas are extremely important for consideration in producing literacy materials.

This chapter is about how the three components—phonology, syntax and semantics—are involved in literacy materials. It also includes a discussion of style as it relates to literacy materials.

The sound system and the production of literacy materials

Chapter 5—Producing literacy materials: What this chapter is about; THE SOUND SYSTEM AND THE PRODUCTION OF LITERACY MATERIALS; The syntactic system and the production of literacy materials; The semantic system and the production of literacy materials; Style and the production of literacy materials; Summary of suggestions.

Most literacy materials are structured according to the **sound system** of the language. This means that the materials are planned to introduce certain sound elements at different points within the materials. Certain phonemes will be introduced in lesson one, more in lesson two, more in lesson three, etc. In the past and in its simplest form, such literacy materials were only a list of the graphemes of the language (and possibly the different syllables of the language). These graphemes or syllables were usually displayed in a chart form and some would be taught in each lesson. Such very simple literacy materials look like the following:

	a	e	i	o	u
b	ba	be	bi	bo	bu
s	sa	se	si	so	su
m	ma	me	mi	mo	mu

More complex literacy materials are usually expansions of this type of simple system. Such materials may consist primarily of a book or series of books. In these the graphemes are introduced in sentences in story form. But, in all of these approaches to producing materials, it is first necessary to decide what sound elements will be introduced in what order. Then they are introduced—either as letters (graphemes), as syllables, in words, in sentences, or in connected stories.

Even when literacy materials consist primarily of pictures for discussion rather than books, they are still normally structured around the sound system. The words which are chosen for discussion with the different pictures are normally words which contain particular phonemes. And these words (and therefore the pictures) are introduced in a pattern which is structured on the sound system.

In any materials that you produce, you will probably want to make at least partial use of some arrangement according to sounds. The following are some **basic guidelines** to use when you are trying to decide how to structure literacy materials from the sound system.

1. **List of phonemes.** Make a list of all the phonemes in the language. These phonemes will have been noted when you were making earlier studies of the language. But now you need to get them listed. Make sure that you list all of the consonants, all of the vowels, any stress, tone, pitch, or other types of phonemes that exist in the language.

2. **List of rules.** Make a list of the rules by which phonemes can be put together in the language. For example, in some languages consonants and vowels can only be put together in very simple patterns. Thus, in some languages of the Phillipines, syllables can either be: (a) vowels alone, like

a; or (b) consonants plus vowels, like *ba*. This, you can see, is a very simple syllable structure. In other languages the rules by which consonants and vowels can be put together can be very complex. The syllable structure by which consonants and vowels can be put together is very complex in many European languages, for example.

But do not look only at consonants and vowels. Remember that there are other types of phoneme in the language. And remember that there are possibly rules which determine when these phonemes can be joined in combination with others. It may be, for example, that certain consonants or vowels can only be used with high tones, or that other consonants and vowels are used only with low tones.

These two things—the list of all the phonemes and the list of rules by which phonemes can be put together—will give you the picture of the basic content in terms of the sounds of the language. Consider, for example, a language in which you write only consonants and vowels: if there are twenty consonants and five vowels, and if the only possible syllable structure in the language is one consonant followed by one vowel, then the language will contain at most 5×20 = 100 possible syllables. Usually, all of these combinations will not actually occur. Furthermore, it is rare that a language would have so few basic sound units to deal with.

Once you have determined what sound structures exist in the language, it is necessary to determine **the order of introduction** for the particular sound elements or combinations in your lessons. You do not necessarily do this in alphabetic order.

The nature of the language itself will determine in part what the best approach is to introducing the elements. If, for example, the syllable structure of the language is simple, it is probably easiest to introduce sound elements by **teaching the syllable structure.** Suppose that you had the hypothetical situation mentioned above: there is a language of five vowels and twenty consonants and a syllable structure of consonant plus vowel. It would be best to arrange the literacy materials in a syllabic approach—teaching the 100 possible syllable combinations. Such a language would be very easy to learn to read.

But teaching reading by using the syllable approach would not work for all languages. Consider another language with thirty consonants, ten vowels and the following possible syllable structures (C=consonant, V=vowel): V; C+V; C+C+V; C+C+V+C; and C+C+V+C+C. Supposing that 30 per cent of these possible syllable structures actually occurred within the language, there would be 2,440,893 syllables in the language. As you can see, this is too large a number of syllables to teach by a syllabic approach. The first language mentioned had 100 syllables. This language has 2,440,893 syllables. There would be a major difference in the way one would introduce the sound elements in these two languages.

We have mentioned an individual phoneme and a syllable approach in introducing sound elements. Another factor to consider is the **frequency** of the sound elements in the language. In all languages certain phonemes are used much more frequently than others. These phonemes and their corresponding graphemes are the ones a reader will come across repeatedly in reading. Therefore, it is useful to teach these very frequent phonemes first in literacy materials.

For example, Sotho contains a phoneme which is normally written as *psh*. It also contains a phoneme *b*. In Sotho, *b* is a very frequent phoneme; but *psh* only occurs in a few words, and those words themselves only occur very rarely. In planning literacy materials for Sotho, it would be best to teach a grapheme such as *b* in one of the first lessons. But a grapheme such as *psh* should be taught only toward the end of the course. Obviously a person would not have much use for the grapheme *psh* in his reading, but he would hardly be able to read two or three normal sentences without coming across *b*.

How can one determine the frequency of the particular elements? One way is to make a **frequency count**. To make such a count one simply goes through a large sample of a language. One counts how often the individual phonemes occur. If one uses a large enough sample, one can determine which phonemes are very frequent and which ones occur very rarely. The sample that one uses should be quite large, numbering tens of thousands of words. (Remember this is a count of phonemes. For a count of individual words, a much larger sample must be used.) Otherwise one cannot be completely sure of the accuracy of the count.

One can get an idea of the general frequency of phonemes from a sample of a few thousand words. Later in this chapter I will mention another way of determining the relative frequency of the sound elements. It is a quicker and, I believe, more useful approach.

There is another thing to be aware of in determining the order of introduction of graphemes. One should determine where potential **learning problems and advantages** will exist if one introduces certain elements together or apart.

For example, the letter *d* in the Roman alphabet and the letter *b* are formed in a very similar fashion. The only difference is which side of the vertical line the curved line is on. And the letters *q* and *p* are also formed in a similar fashion. Again the distinction is made on which side of the vertical line the curved line is put. The four graphemes, *b, d, p* and *q*, make up a set of symbols which are all formed by one long straight line plus a common curved line. It is the position of the straight line in relation to the curved line that distinguishes the letters. These four letters can be very confusing for a person who is learning to read. Thus it would be advisable not to teach all four of them in lessons near to each other at the beginning of the course. This is true even though all four might be very frequent in the language. Separating the four symbols in the materials would help avoid confusion.

But there can also be advantages in putting particular graphemes close together in the materials. For example, in the Roman alphabet the vowel letters *i* and *o* are very different shapes. They are so different that it is easy for a person to see the differences between them easily. But *o* and *e* are more similar to each other, and might be confusing to a learner. Therefore it is probably a learning advantage to teach *i* and *o* close together—but not *e* and *o*.

When you are looking for the difficulties and advantages of putting certain elements together, be sure to look at the **sound system** as well as the written system. Sometimes phonemes are not written in the language. Yet in some cases they will make a difference in learning to read the written language—even when they are not written. For example, in some languages of Africa there are unstressed syllables coming as the last syllable of a word at the end of a sentence. In such cases vowels become very difficult to hear. One should not teach a new syllable in this sentence-final position for the vowels will not be heard clearly in the spoken part of the lesson. Stress, or lack of stress, is not written in these languages, although it is spoken. If one were only to look at the written part of the language, one would see no difficulty in teaching the vowels in sentence-final position. But, when one pays attention to the spoken language as well, one can note the problem involved.

The syntactic system and the production of literacy materials

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Chapter 5—Producing literacy materials: What this chapter is about; The sound system and the production of literacy materials; THE SYNTACTIC SYSTEM AND THE PRODUCTION OF LITERACY MATERIALS; The semantic system and the production of literacy materials; Style and the production of literacy materials; Summary of suggestions.

People structuring literacy materials often pay most attention to the sound system. But they sometimes forget that it is very important to look at the structure according to the syntactic system as well. In this section, we will look at some of the grammatical considerations that should be given to structuring literacy materials. (Before you go farther: Do you remember what a morpheme is? If not, go back and look at the second section of Chapter 2.)

First we need to look at the distinction between two types of morpheme. Morphemes, as you will remember, are the smallest units of sound which have meaning. For example, in English 'boy' is one morpheme and 'boys' is two morphemes.

In all languages there are two basic types of morpheme. One type is called a **lexical morpheme**, and the second type is called a **grammatical morpheme**. The lexical morphemes are those which refer to meanings in the real world. They deal with objects, events or abstracts. For example, the morpheme 'boy' is a lexical morpheme.

The second type of morpheme is called a grammatical morpheme. (Some people call these **functors**.) Grammatical morphemes are those which have meaning not in the real world, but within the language system. The morpheme 'third person singular present tense verb suffix' (which is normally represented by 's' in written English) is a grammatical morpheme. The word 'walks' contains two morphemes—one lexical morpheme 'walk' and one grammatical morpheme 's'. In all languages there is this distinction between lexical (or real world) morphemes and grammatical (or language-oriented) morphemes.

There are certain differences in the occurrence of these two different types of morpheme. First of all, let us look at the grammatical morpheme. **Grammatical morphemes are limited in number** in any language. They make up a finite set of morphemes. In Swahili, Japanese, Zapotec, Hindi and Arabic—it is always possible to determine all of the grammatical morphemes in the language. One can make a list of them, because there is a limited number.

A second point about **grammatical morphemes** is that they **are extremely frequent** in language. Because the grammatical morphemes are language-oriented, any given sentence in any language will normally contain quite a large percentage of them.

In summary, the number of grammatical morphemes is limited, and they occur very frequently.

The grammatical morphemes deal with language structure. When a person reads, he often does not even notice many of the written grammatical morphemes. He is able to produce them automatically, for the sense demands that certain morphemes be used. It has been suggested that one should not introduce readers to new graphemes or new syllables through grammatical morphemes. Readers often do not pay any attention to the written grammatical morphemes since they can understand without looking at them. For example, in English a person might read a sentence which says, 'The two boys were coming'. The 's' of 'boys' is a grammatical morpheme. A person who speaks English and who reads 'two boy' will automatically change it to 'two boys', for the sense demands that the plural morpheme 's' be present.

Lexical morphemes are those which refer to things in the real world. Unlike the grammatical morphemes, they **are limitless in number.** It is always possible to create new lexical morphemes or to change lexical morphemes. The large majority of words that exist in a language are made up of these lexical morphemes. Individual lexical morphemes tend to occur less frequently than individual grammatical morphemes. This is probably due to the fact that there are so many.

Again one can use English as an example in looking at the relative frequency of lexical and grammatical morphemes. There have been many different counts of English words—some of written and some of spoken words. Most of the counts have listed the same very frequent words, with a few differences. In one typical list of the fifty most frequent words in English, only two are lexical morphemes and the other forty-eight are grammatical morphemes. For English makes very frequent use of words such as 'and, of, the, to, in, it', etc. The few lexical morphemes that are used very frequently in English have very **general meanings.** They are words such as 'man, say, make, do, know'.

There have been word counts of a number of languages throughout the world. The same general pattern holds true for them. The very frequently used words represent grammatical morphemes. The lexical morphemes are not used so frequently, while the more frequent lexical morphemes have very general meanings.

In a reading programme the lexical morphemes are probably more useful for teaching new elements than the grammatical morphemes, since one cannot read the lexical morphemes automatically. If one wants to understand what is being expressed, one must look at each one of these morphemes carefully.

This discussion of grammatical morphemes and lexical morphemes returns us to the concept of **frequency counts.** Earlier in this chapter, it was stated that to determine phoneme frequency one can count the individual phonemes in words. A much quicker method (and in my opinion a valid one) is to make **a list of the common grammatical morphemes** of the language. Then one lists the phonemes which are used within these grammatical morphemes. Because these morphemes are used so frequently, the phonemes that are used for the morphemes will also be used very frequently.

Although this is only an estimate of frequency, it is probably a sufficient estimate for literacy purposes. It is not important in preparing literacy materials to know which is the seventeenth and which is the eighteenth most frequent phoneme, for the organization of literacy materials by phoneme frequency is not as refined as this, and has no need to be. It is important however to say that ten or twelve or fifteen phonemes make up 50 per cent of the most frequent phonemes in the language. This can be done with fairly good accuracy by looking at the grammatical morphemes.

There are differences of opinion about the value of frequency counts to literacy programmes. Not everyone will agree with the following comments.

Frequency counts which are made from lists of words in written materials are probably not the most suitable counts for literacy purposes—even though one is teaching people to read and the list is taken from written materials. There is probably a more useful type of list. People who are learning to read would probably benefit most from counts which are based upon spoken language. The reason for this is that written language often uses words which are not commonly used in the spoken language. They are sometimes unknown to the speakers of the language. It is best to use word counts based upon the language that people actually understand.

A second point about frequency counts is that they are only valid when large numbers of words are counted. This has been mentioned earlier in this chapter.

Thirdly, in my opinion, **frequency lists** for literacy purposes **are greatly overrated.** I believe that many literacy workers use complex frequency lists in a sincere attempt to be scientific in what they are doing. But it is not necessary in the majority of cases to make elaborate frequency counts. If the counts already exist, one should make use of them. But for languages in which a count of the most frequently used words or phonemes does not already exist, I would not advise literacy workers to spend a large amount of time making one. Frequency lists are very useful in language-learning programmes, but they are of only limited value for literacy.

More on formal and informal language

(Before you go farther: Do you remember that languages often differ between formal and informal language structures? If not, look back and read the section on 'Socio-linguistics' in Chapter 2.)

You will remember that we discussed the difference between **formal language** and **informal language** in Chapter 2. Sometimes the difference is one of pronunciation; sometimes it is one of vocabulary; and sometimes, in addition, it is one of syntax.

For example, in the impersonal construction in English the use of the word 'you' is less formal than the use of the word 'one'. It is possible to write a sentence such as the following: 'What do you do when you come across a problem like that?' Or it is possible to write the same meaning in the following way: 'What does one do when one comes across a problem like that?' The first of these two sentences, the one using 'you', is less formal than the sentence using 'one'. All languages will have situations in which one grammatical element is more formal than another grammatical element. In structuring literacy material for the new reader, one should try to make a list of the differences between formal structures and informal structures. In the production of literacy materials, it is best to begin with informal structures—unless there is some socio-linguistic reason for starting with formal structures—for formal structures are often not as well known to the people as the informal ones.

Comments on written language

Written languages often have grammatical structures which are not found in the spoken language. This is particularly true when the language has been written for a long time. Of course, if the language has never been written before, there cannot be special written grammatical constructions. But over a period of time, these structures do develop. Some of these structures are borrowed from other languages. Some of them might be retained in writing, but not in speech, from an earlier period.

An example of this special written structure is one which is called a nominative absolute in many European languages. It is a construction that occurs in the written language, but does not normally occur in spoken language—unless a person is imitating a written language. It is a structure which was borrowed by many languages from Latin and Greek. An example of a nominative absolute construction is as follows: 'The boys having finished, we decided to go home.' The nominative absolute in this sentence is 'The boys having finished'. This structure is a formally learned one in English. People do not normally learn it as they are growing up at home. They learn it at some time or other in school through written language. It is extremely likely that there are many native speakers of English who have never produced a nominative absolute construction—either in speaking or in writing.

The person producing literacy materials should be aware of grammatical elements in the written language which do not normally exist in the spoken language. He should not introduce any of these elements at the beginning of a literacy course. And when he does introduce them at the end of the course, he must be prepared to teach people how to use them.

Comments on the spoken language

There are sometimes certain spoken grammatical elements which do not occur normally in writing. At one level, these are simply vocabulary words which are taboo to put into writing. There is no difficulty in actually writing them; it is simply that one avoids them. In some countries there may even be laws against the writing of certain words.

But, at another level, there are other types of word which are frequently not written for other reasons. One such type of word is the **interjection.** Examples in English are 'oh, ouch, whew'. Interjections occur in all languages. Often their sound structure is different from that of other words. Many people never learn how to write the interjections. For example, the word above—'whew'—is one which I personally would not hesitate to speak in English. But I HAVE NEVER WRITTEN IT BEFORE IN MY ENTIRE LIFE. And I may never write it again. There is a difference of opinion as to whether one should teach the writing of interjections in a literacy course.

Another common type of word which is frequently not written is one which is called an **ideophone.** An ideophone is a word which by its sound is considered to represent the sound or other qualities of some real-world object or activity. These are words which are often referred to as being onomatopoeic. For example in Gbeya, a language of the Central African Empire, one can say *wakap wakap,* which roughly means 'like the sound made in movement through tall grass'. As was true with interjections, people who learn to read and write are often not taught ideophones, since the sound structure of ideophones is often quite different from that of other words. It can be difficult for people to learn how to write ideophones properly. Within the literacy programme it is suggested that one should teach how words such as ideophones are written.

Redundancy

Language is by its very nature repetitious, allowing us to repeat the same information several times. This repetition in language is called **redundancy.**

It is important to give the same information several times in language for a number of reasons: (a) people do not listen to everything that is said, and they may miss information which has been said only once; (b) people do not remember everything that they hear; (c) people do not always understand everything that they hear for the first time; and (d) there is often what is called 'background noise' in speaking situations. This may be actual physical sound which makes it difficult to hear, or it may be some other factor such as distance from the speaker. For all of these reasons, language automatically contains redundancy. It is so common in spoken language that, unless it is done to an extreme, people do not even notice that the redundancy exists.

In written materials, however, many people are reluctant to be redundant. Yet, in written material as well as in spoken language, the receiver does not always receive everything for the first time. His eye may pass over it; or he may not understand it; or he may not be able to remember it. And, in fact, written language has an added disadvantage: the reader cannot ask questions if he does not understand or remember. That is, written language does not offer a feedback situation. Thus it is important for a reader to be able to get information for a second or third time—and often expressed in different words each time.

Reading does have several advantages in redundancy over speaking, however, for a reader can always stop and go back. Or if he does not understand what he is reading, he can slow down and regulate the speed of information. Unfortunately, a large number of people who read never stop and reread what they have not understood. (This is a skill that must be taught to people.) In fact, even at university level students often have to be taught how to study written materials so that they can understand them.

Many written traditions, however, make it unacceptable to repeat information as it is needed. It is considered to be writing down to the reader—to treat him as a child. Yet the reader needs this redundancy. The repetition of information is often particularly important for people who are learning to read. I therefore suggest that one deliberately build redundancy into literacy materials. The literacy worker can make sure that the relevant information is repeated frequently enough for the reader to understand it: (a) he can do this within the context of the lesson; (b) he may have a separate revision or review exercise; or (c) he may have a summary of content at the end of each lesson.

In addition, literacy programmes will do a better job of teaching the skills of critical reading if they include lessons on how to study written materials. They can teach the importance of reading the table of contents, of looking back at section headings, and of going back to review what has been forgotten.

Ease of understanding

In all languages there are some grammatical structures that are easier to understand than other grammatical structures. In written language this means that there are some grammatical structures that are easy to read and others that are difficult to read. The structures will differ from one language to another. But it is useful for a literacy worker to know the **easy structures** and the **difficult structures.**

Literacy workers usually plan literacy materials with the idea of introducing at first those phonemes which are most frequent. They should also organize the literacy materials according to **grammatical structures.** The literacy materials should include not only the easy-to-read structures. The difficult-to-read structures should be included as well, but they should be put at the end of the course. Very few literacy workers actually try to structure their materials according to grammatical difficulty.

Here is an example of the type of difficult-to-read structures that I have been discussing. There is a difference in the degree of difficulty in English between **front-heavy sentences** and **back-heavy sentences.** A front-heavy sentence is one in which the large part of the sentence comes before the verb or before the main clause. A back-heavy sentence is one in which the large part of the sentence comes after the verb or the main clause. Since in English the subject most frequently comes before the predicate, a front-heavy sentence is often one in which a large percentage of the sentence comes before the subject. Here is an example of a front-heavy sentence in English: 'Whenever what you have attempted to do first cannot adequately or suitably be accomplished, you should try something else.' Here is the same content written in a back-heavy style: 'You should try something else, whenever you cannot adequately or suitably accomplish what you have attempted to do first.' The second sentence is easier to understand than the first. The number of words is exactly the same in both of these sentences, and the length of the words used in both sentences is exactly the same. The first sentence has a word 'be' that the second does not have; and the second has a word 'you' that the first does not have. The only difference is the positioning of words, yet the **back-heavy sentence is easier to understand.**

There are several possible reasons to account for the fact that a front-heavy sentence is more difficult in English. It may be simply a matter of frequency. The back-heavy sentence is more common. Therefore the unusual structure of a front-heavy sentence is likely to be more difficult to understand. Other possible explanations are: (a) the back-heavy sentence in English is the basic structure; and (b) the front-heavy sentence is a transformation of the basic structure. This argument assumes that basic structures with few or no transformations are easier to understand than those with more transformations. Whether this is true or not is open to question.

The point of front-heavy sentences and back-heavy sentences in English was only given as an example of the differences between difficult-to-read structures and easy-to-read structures. Every language will have some of these differences. A person producing literacy materials should try to determine what the more difficult structures are. He should delay the introduction of these structures until the latter part of his course.

Let us look at this question of ease of understanding from a different viewpoint. For many years there have been attempts to measure the reading difficulty of a particular piece of writing. The degree of difficulty of written materials has been called the **readability** of the materials. And the measurement for readability is usually called a **readability formula.** Most readability formulas have been based on two things—the length of the sentences and the length of the words.

It has been demonstrated that, for many languages at least, longer sentences tend to be more difficult to read than shorter sentences. And longer words tend to be more difficult to read than shorter words.

Some people have argued that **readability formulas are not valid.** They point out that certain sentences of the same length, with words of the same length, often differ in their difficulty of reading. This is a valid criticism of readability formulas. The two sentences which were given above, one back-heavy and one front-heavy, are examples of this.

Let us look at the linguistic bases of readability formulas in order to see something of their validity.

One basis for the formula lies in the difficulty of sentences with embedded clauses. (An **embedded clause** is a dependent clause within another clause.) In general, sentences with embedded clauses are more difficult to read than sentences without embedded clauses. The following sentence has no embedded clause, 'The fat old man came to my mother's house last night.' The following sentence does have an embedded clause, 'The man that you said would be here on time came.' The second sentence is normally a bit more difficult to understand than the first one—even though the sentence length is the same.

Sentences with embedded clauses are often much longer than sentences without embedded clauses. Since sentences with embedded clauses are more difficult to read, it follows that longer sentences are often more difficult to read than shorter sentences. But this is not always true.

In addition to the simple factor of length itself, there is one other factor involved. There is often **more meaning content** in longer sentences. The very fact that there are more words and more morphemes means that the sentence probably contains more individual meanings. And as the sentence grows in meanings and relationships between meanings, then it can become more difficult to understand the sentence.

The second principle on which most readability formulas are based is the **length of the words.** It is assumed that longer words are more difficult to read than shorter words. It is probably true in all languages that unfamiliar words are more difficult to understand than familiar words. And in most languages there is a tendency to shorten the very frequent, familiar words—particularly in informal speech. As a result, the very **familiar words tend to become fairly short.** Since the familiar words tend to become shorter, then the unfamiliar are longer. And the unfamiliar words tend to be more difficult to understand. Thus the longer words tend to be difficult to understand. This is one basis for the use of shortness of words as a criterion in readability formulas. But it is not always valid.

In addition, **long words often contain more morphemes** than short words. You will remember that the word can consist of more than one morpheme. The basic means of adding morphemes in a word, in all languages, is to increase the length of the word, although occasionally the word might be changed in some other fashion. As a result, words with more morphemes tend to be longer than words with just a few morphemes. And since morphemes are sound units relating to one meaning, the longer words often have more meaning content. Look at the following example of how words can be built up in Michoacan Aztec.

In Michoacan Aztec the word *nečlamačiltik* can be roughly translated as 'he informed me'. It is made up of three morphemes: *neč* is a morpheme rather complex in meaning—it means approximately, 'the subject is third person singular and the object is first person singular'; *lamačilti* means approximately 'inform'; and *k* means 'past time' of a particular type. The one word has a heavy meaning load. Compare the complex meaning of *nečlamačiltik* with the simple meaning of *pelo* 'dog' in the same language.

In summary, the meaning structure of longer words is often more complex than the meaning structure of shorter words. This can make them more difficult to understand.

You can see then that there is some linguistic basis for readability formulas since longer sentences tend to be more difficult to understand and longer words tend to be more difficult to understand. But these are not the only factors involved in reading difficulty and for this reason most readability formulas are only valid to a certain degree and should not be applied too rigidly.

If there were some way to include in readability formulas such factors as: (a) the number of archaic words no longer used by most people; (b) the morpheme complexity of a word; (c) the number of embedded clauses; and (d) a number of such structures as front-heavy sentences—then it would be possible to make readability formulas more accurate. It is not impossible to do this. These formulas would be more complex to use, but they would be more accurate.

QUESTIONS

1. *Look at the following words in Zulu. Which do you think would be easy to read? Which do you think would be difficult to read? They are all verbs including the basic morpheme thanda, 'love': thanda—thandeka—thandekisa—nithandenelani—ngingakathandi—ngangingathandi.*
2. *Why would it be better to teach the letter 's' in English in a word such as 'street' rather than in a word such as 'beds'? (If you have difficulty in answering, look back at the explanation of the two types of morpheme at the beginning of this section.)*
3. *Why is it sometimes necessary to repeat oneself in writing?*

The semantic system and the production of literacy materials

Chapter 5—Producing literacy materials: What this chapter is about; The sound system and the production of literacy materials; The syntactic system and the production of literacy materials; THE SEMANTIC SYSTEM AND THE PRODUCTION OF LITERACY MATERIALS; Style and the production of literacy materials; Summary of suggestions.

(Before you go farther: Do you remember what a semantic system is? If not, turn back and read the second section of Chapter 2.)

The semantic system is the meaning system of language. Each individual language has its own semantic system—in exactly the same way that each language has its own sound structure and its own syntactic structure. Although the semantic systems of different languages are different, there are some general similarities between the semantic systems of all languages. Here are some things which are common to all semantic systems.

Four meaning classes

All languages classify meaning into four meaning classes: objects, events, abstracts and relationals. **Objects** are exactly what the name implies—real world objects as the language recognizes them. **Events** are also what the term implies—happenings, things which take place. **Abstracts** refer to qualities of objects or events. **Relationals** show the relationships between objects, events and abstracts.

One must be careful to remember that we are talking about semantic classes, not syntactic classes. In most languages the semantic class, for example object, is realized most frequently by some type of syntactic class, for example noun. Events are most frequently realized by verbs. But there is not a one-to-one relationship between an object and a noun, or an event and a verb.

On the syntactic level, objects, events and abstracts are normally realized by lexical morphemes. And relationals are often realized by grammatical morphemes.

Different language traditions often put different emphasis on the types of semantic class that are considered as pleasing. For example, in European languages teachers often tell students to put more verbs and more action words into their writing. The students are told not to overload their writing with adjectives—which normally realize abstracts. At the same time, teachers of writing must frequently tell students to make sure that they use proper relational words: (a) so that the readers will be able to understand when they are going from one topic to a second topic; or (b) so that readers will be able to understand the time-relationships between events; or (c) so that readers will be able to understand the logical relationships between objects or events. All of this is part of the preferred **style** of the language (which is discussed below in greater detail.)

Most people producing literacy materials simply ignore questions of style and clarity. And many literacy materials are rejected by the people reading them for these very reasons. Style is important, even at a starting level of literacy. And showing proper time-sequences and logical sequences is important even with the simplest reading material.

From general to specific

All languages divide meaning into levels of generality—from the more general meanings to the more specific meanings. These levels of meaning are often called **hierarchies of meaning.** For example, English verbs can be at a very general level. An example is 'do', the most general verb in English. At a lower level there are verbs such as 'move', which is more specific in its meaning than 'do'. Even lower down in the levels is a verb such as 'walk'. 'Walk' is more specific than the verb 'move'; and 'move' is more specific than the word 'do'. Again even more specific is a word such as 'stroll'. The sequence 'stroll, walk, move, do' goes from very specific to very general.

In many languages specific words are considered more interesting than general words. But many literacy materials are often written in very general terms. As a result, in my opinion, **many literacy materials are very boring.**

Look at the following two sentences in English—the first very general and the second more specific. 'The people did ...' 'The thieves slid the diamonds into their inside pockets.' You can see that the first sentence is very general. It gives very little information and is not really very interesting. The second sentence is more specific—it gives more information. And most people will probably find it more interesting to read than the first.

If one looks at words that are very frequent, they are **general** words. Yet many people base their reading materials for literacy programmes on such frequency lists of mostly very general words. Reading materials based on these lists of general words are usually very boring.

Denotative and connotative meaning

All languages assign a denotative meaning to words which realize objects, events and abstracts. **A denotative meaning** is one which points out what the word refers to. But in addition to denotative meanings, languages assign to many words a second type of meaning. This second type of meaning is called **connotative meaning.** It is an emotional or judgement-type of meaning. It says that a particular thing is good or bad or interesting or uninteresting. These connotative meanings are the basis for the emotional responses that people have towards words.

The words with very general meaning often have very little connotative meaning. Thus there is probably little emotional response to a word such as 'do' or 'doer'. But there might be quite a bit of emotional response to a word such as 'liar'. Some people have suggested that the words used in literacy materials should be **emotionally charged words,** because of the response that these words bring forth. People are interested and they pay attention when there are strong connotative meanings to words. But if you plan to make use of emotionally charged words in literacy materials, there are several things that you should remember.

First of all, some emotionally charged words are **taboo** words. They cannot normally be written in literacy materials. This is something which non-native speakers must pay careful attention to when they are helping to produce literacy materials. For example, in Tswa of Mozambique, the word which is translated as 'stomach' was put into basic literacy materials. But this word was not acceptable to the native speakers of the language. The connotations were too strong and the word was a taboo word for use in general situations. However, the word was completely acceptable to the non-native speakers of the language who had suggested that it be put into the materials.

A second thing to remember about emotionally charged words is that one cannot simply guess at the emotional strength of all words. Again this is particularly important when non-native speakers of the language are helping to produce literacy materials. There are ways, however, of **measuring the emotional content** of words.

One of the most frequently used ways of measuring emotional impact is referred to as the Osgood Semantic Differential Inventory. There have been a number of other inventories developed similar to the Osgood type. Basically the measurement of the emotional charge of words in these tests is as follows.

A set of opposite categories is established: good/bad; strong/weak; high/low; warm/cold; attractive/ugly. Then a scale is given between these two opposites. The category 'good' might be given a value of 1 and the opposite 'bad' a value of 10. The category 'attractive' might be given the same value 1 and the opposite 'ugly' the value 10 as in Figure 5.

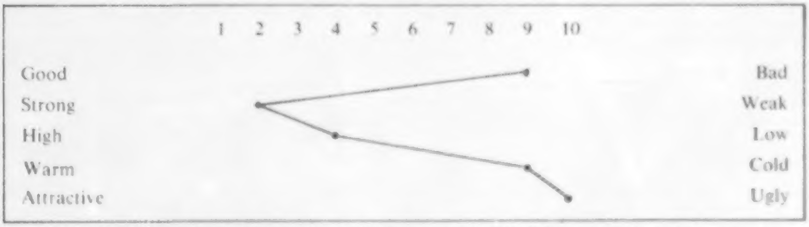

FIGURE 5. *Hypothetical scoring of the word 'train' for emotional response*

Every word that one is testing for emotional charge is given to a group of native speakers of the language. They must rate each word according to the different categories. They are not allowed to omit any ratings. For example, with the word 'mother', some people might be hesitant to give a rating between high and low; but these are required for all of the words. One draws a curve between the points which are allotted to the particular words. One thus gets an idea of the emotional contour of the word. (One looks at the total profile; one does not average the points.)

If the scores for words centre around the 5 or 6 mark, then the words are very neutral and have almost no emotional charge. If they centre around 1 or 2, they tend to have a very positive meaning. If they centre around 9 or 10, they are considered to have a very negative meaning. If one is looking for emotionally charged words, one would look for those with scores at either end of the scale. If one wants those with positive attributes, one would normally remain within the 1, 2, 3 range. (Note: the above inventory is only an example of the types of scale that are produced. It is not a valid measure in itself. If you are interested in this topic read the material by Osgood in the 'Suggested readings' section at the back of this book.)

Discourse structure

All languages have their own forms of discourse structure. By **discourse** we mean connected continued language longer than a single sentence. A discourse is made up of many sentences. In the same way that a language will structure the grammar within an individual sentence, it will structure the form of a discourse. This structure is primarily semantic structure. Not all aspects of discourse structure are particularly relevant to literacy workers, but the following points are among those that are.

1. Many languages have specific ways that one can start particular types of discourse and specific ways in which one can end a discourse. For example, in English fairy tales, there is the common beginning, 'Once upon a time . . .'. Whenever one reads this, one knows that what follows is a fairy tale. In Nama Hottentot it is common to end certain types of stories with a phrase which can be roughly translated as 'And this is a story with a tail.'

Some languages have very important means of beginning and ending a story. Yet very rarely do first-stage literacy materials make use of the proper way of beginning and ending. As a result, they often sound very peculiar to the people reading them. Sometimes they sound as if they had started in the middle rather than at the beginning. There are sometimes different ways of marking the beginning of a true story as opposed to the beginning of a fictional story. Or there are often differences in the way one starts a conversation compared with the way that one would start a historical account. It is important for the literacy worker to be aware of what the traditional ways of beginning and ending discourse are.

2. There are often traditional ways of marking the divisions within a discourse. And there are often traditional ways of marking transitions between the divisions. By **transition** is meant how one goes from one division to another. In conversation, for example, it is very rude in many

languages for a person to start talking about a completely new topic when other people have been talking about something else. Often it is necessary for there to be a silence before people can start a new topic. Or perhaps people must apologize or use some special words in conversation in changing the topic. In English, one might say, 'I know I'm changing the subject, but...'. Or one might say, 'What you said reminds me of...'. These are means of transitions between divisions. Often the methods of transition in conversation will be different from the transitions in stories. If one is telling a story that took place in time, it is often necessary in different languages to start the transitions with words of time. This word might be something like 'then' or 'after that' or 'later', etc. The literacy worker should know the formal ways of making transitions.

The contents of the discourse between transitions are primarily semantic units. Some people have called these units **text blocks.** The text block is that unit which centres around a dominant semantic content. Between text blocks there are usually transitional phrases.

In many writing systems one uses semantic units (similar to text blocks) which are normally called **paragraphs.** Within a paragraph one deals with a common semantic topic. There are many cases where paragraphing in a particular language is simply based upon the paragraphing in the resource tradition language. This is particularly true where the literacy materials have been partially produced by non-native speakers of the language. The materials have tended to neglect the natural text blocks of the language. Instead they have used paragraph structure based on the home language of the non-native speaker. As a result, paragraphing in many languages of the world has almost nothing to do with the structure of the language. If one knows what the transitional elements are between the text blocks, then one has a beginning guide to proper paragraphs. A paragraph which has transitional words or phrases in the middle is often very confusing to readers.

3. Most languages make use of discourse structure to point out what is a **new participant** and what is an **old participant** in the discourse. This means that the first time that something is mentioned, it is often referred to in a very special way. But after it has been referred to once, then it is old information. It is then often referred to in a different fashion.

There are often special **substitute words** in language which are used for things which have already been mentioned. Most languages have word classes generally known as 'pronouns', which refer to objects that have already been mentioned. If one does not make proper use of pronouns and similar words in writing, the readers get confused.

Look at the two following sets of sentences in English: (a) 'John came into the room. Bill was standing. Then he sat down.' (b) 'John came into the room. Then he sat down. Bill was standing.' In the first set of sentences, who sat down? The sentences say 'he sat down'. But it is impossible to tell from the sentences whether it was 'John' who sat down or 'Bill' who sat down. For 'he' is a pronoun which refers to a masculine singular person who has already been mentioned. Since there are two masculine singular persons who have already been mentioned, 'he' could refer to either 'Bill' or 'John'. It is ambiguous in these sentences as to who sat down.

But in the second set of sentences, ask yourself the question, 'Who sat down?' Here it is very clear that it is 'John' who sat down. The reason is simple. 'He' refers to a masculine singular person who has already been mentioned. In the second set of sentences there is only one masculine singular person who has already been mentioned. It is 'John'; and therefore 'he' can only refer to 'John'. The person who sat down was 'John'.

All languages have similar types of situation in which things which are old information are treated differently from things which are new information.

This question of old and new information is particularly important in literacy materials when one is trying to reinforce a new word or new syllable or new grapheme by repeating the same word in many sentences. Often the repetition of the word breaks the rules concerning old information. At best this can sound peculiar. At worst it can be incorrect.

One occasion when it is very important to identify participants well is when one is going from one lesson to another. In some materials, a person may have been mentioned by name in lesson 3. At the beginning of lesson 4, however, the materials may refer to the person by a pronoun, rather than by name. Since lesson 4 will be read on a different day from lesson 3, it is important that lesson 4 starts in a proper fashion with the person's name. **Each lesson in literacy materials must be considered a new beginning.** Any information that is included within an individual lesson must be treated properly—in the way that new information is treated.

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4. Particularly in a narrative, a story, or a historical account, it is very important to keep **time-relationships** clear. Most languages do this in two ways—by proper use of verb tenses and by time adverbs or phrases. Although many literacy materials use time adverbs or phrases properly, it often happens that literacy materials do not make proper use of verb tenses. It is not unusual in literacy materials for people to move about

from one tense to another in an incorrect fashion. As a result the readers are not able to understand what is going on.

5. In written materials, the author of the materials must make a decision as to what type of involvement he will have—what is his **role?** Is he going to put everything in the third person—'it' or 'they'? Or will he at times refer to himself in the first person, 'I think' or 'we suggest'? The use of the first person is more intimate in most languages. And perhaps it creates greater interest. But in some languages it is not proper to use the first person in narrative, and especially in written narrative.

In addition to the manner of including himself in the materials, the author often includes himself in the materials by his **attitudes.** Often the writer of the materials will express agreement with what has been said or perhaps within the materials he will laugh at people or events. It is best for writers of literacy materials to decide in advance exactly what their attitudes and involvement are going to be. This is not entirely a matter of free choice. Certain languages demand that things be done either one way or another. It is always best to determine in advance what freedom a person has with his involvement in the written materials.

Content areas

Any literacy materials must reflect a content and style of language which is meaningful to the lives of the readers. From a linguistic viewpoint, the contents of materials are semantic areas which bring about strong positive emotional response in the readers. This means that the semantic content area must be of a type which will bring about positive involvement on the part of the readers.

The materials should be what the readers want to read about—not just what the writers think is good for people to read. Some people producing literacy materials might have a false idea that, because whatever they want to teach will be ultimately good for people, it will be interesting to people. This, of course, is not necessarily true. It is the task of the literacy worker to discover what the positive content areas are for the **reader's response.** And he must also try to suggest other positive content areas.

For example, it is certainly true that most people want to improve themselves economically. The literacy workers may have decided that people could improve themselves economically in an area if they learned to grow a new crop such as cotton. Cotton growing, however, does not necessarily produce a positive response in non-cotton growing people. And they will not necessarily be interested in reading about cotton growing—unless they are first shown how cotton growing can benefit them. In such a situation one must stimulate the people's interest. For the interest is not necessarily there in the beginning. It will not be good enough to prepare materials on cotton growing, teach people to read them, and then later show them how they can benefit by growing cotton. For people will not be interested in the materials. One has to convince them first. It is, of course, not an easy task to determine what the content areas of literacy programmes should be.

Many people have attempted to determine this content area. Within some programmes people have developed what they call the **keyword concept.** Let us look at this keyword concept from a linguistic point of view. We will be interested primarily from the semantic viewpoint.

Keywords are considered to be areas of special concern to the people. The areas are, among other things, semantic areas; they are not only neutral words; they are areas with high emotional impact. If one is planning literacy materials around a keyword, it is necessary to be able to determine validly what the semantic areas of high emotional impact are.

Frequency lists are of no value for choosing keywords. The most common words are the grammatical morphemes. The common lexical morphemes are realized in very general words, such as in English, 'do, make, person, say'. These words do not reflect the type of emotional impact that one is trying to get at in the keyword. Therefore it would be rather futile to use one of these lists. And it would also be futile to sit among a group of people and try to listen for the words that are used most frequently. For the words which are used most frequently are the general words and those realizing grammatical morphemes. These are not keywords.

The following, however, is a possible use of frequency lists. One could theoretically count words spoken by a group of people. One would then find out which words are more frequent when compared with a normal frequency list. If some words can be identified, then one would be able to say, 'These things are more important to this group of people than they normally are to other people.'

The problem with this practice is that there is such a large amount of work in counting words. As has been said before, one must count tens or hundreds of thousands of words before one is able to say anything valid. Thus one can theoretically compare the frequency of words in particular situations with the normal frequency. But it is usually impractical to do this. The amount of work involved is too great.

On the other hand, the following is not a valid way of determining keywords. One could go to a group of people, listen to their conversations, and decide what the keywords and issues are. **General listening** is invalid because it is almost impossible to listen to these conversations without influencing them. And one can easily (even unconsciously) lead people to discuss topics that one wants them to discuss. It is also too easy to hear others say what one wants to hear them say. As a result, one can read into other people's conversations what one thinks is important. This way of finding keywords is not really very accurate. It is not difficult to do, but it is easily subject to bias on the part of the people listening.

Is there an alternative between the two methods mentioned above? The frequency list might be very accurate; but it is too much work. The simple listening to conversations and discussions might be fairly easy; but it is not necessarily very accurate. One might carry out something like the following which is **a compromise** between the two above approaches.

One could go to the people, listen to their discussions, listen to their conversations. In this way one develops an initial hypothesis as to what the key areas might be. Then one could give a semantic differential inventory test to those words which appear to be keywords. Thus one can find out what kind of emotional response there is to the words. In this fashion one will be able to discard certain words. And one will be able to find that others are even more important than expected. One can thus take advantage of the almost intuitive grasp of key areas which can be derived from discussions. At the same time one can try to get a greater accuracy and to overcome bias by actually measuring certain words.

When one is choosing keywords, as opposed to key areas, one should keep in mind the basic point which has already been mentioned several times—that specific words usually create greater interest than general words. As a result, in choosing keywords it is best not to choose abstracts or general words such as 'truth' or 'justice'. Rather one should choose more specific words which are related to justice or truth.

QUESTIONS

1. *In the Quechua language of Ecuador, singular or plural morphemes are only added to nouns the first time the noun is used in a discourse. After that no singular or plural morphemes are used. Are there any similar situations in any languages you know, where new information is treated differently from old information?*
2. *How would you choose the keywords to use in literacy materials?*

3. *Which word in each of the following pairs is more general in meaning?*

A	*B*	*A*	*B*	*A*	*B*
person	*: orphan*	*deer*	*: mammal*	*air terminal:*	*building*
helicopter	*: aircraft*	*game*	*: football*		

Which word in each pair seems more interesting?

Style and the production of literacy materials

Chapter 5—Producing literacy materials: What this chapter is about; The sound system and the production of literacy materials; The syntactic system and the production of literacy materials; The semantic system and the production of literacy materials; STYLE AND THE PRODUCTION OF LITERACY MATERIALS; Summary of suggestions.

All languages have many correct ways of saying the same thing. And any speaker or writer of the language may make a choice from the many correct ways of expressing things. This choice from possible correct ways of doing things is what we mean by **style.**

Style at times is **closely related to socio-linguistics.** One speaks of formal style as opposed to informal style. Or one can speak of intimate style as opposed to public style. In any of these situations a person chooses, from many grammatically correct ways of speaking or writing, the ways that are appropriate to the situation.

Writers of literacy materials should be concerned about choosing a proper style. It is not enough simply to prepare a short reader with grammatically correct sentences. The materials must be in some style that is appropriate.

We will not in this book go into details of the possible styles in a language. For our purposes we will contrast **two basic types of style.**

The first style is one which is concerned for the content of communication. This style can be called the **informative style.** The second style is one which is concerned with the emotional response from the reader. This we will call the **literary style.** The first type of style is concerned with giving information. Many scientific books or articles are written in this informative style. The second style is concerned with the emotional response of the reader to the communication. Much of what is called literature reflects aspects of this second type of style.

It seems that many writers of literacy materials are only interested in the informative style. Everything is written so that the meaning can be easily understood. There is usually little concern for the emotional effect of the materials upon the reader, except for the desire to talk about relevant content. Yet literacy materials should be designed to interest people in reading as well as to teach them the mechanical skills of reading. The informative style is not usually the best for encouraging interest in the materials.

Often literacy workers have been aware of the need to create interest. They have learned, often through writing courses, that people like to read about people. And, therefore, they often give their information in the style of a story in which one person relates information to another person. Thus the typical literacy material designed to improve agriculture will not be written purely as a scientific textbook. Often there will be one person who explains to the others the scientific content in a conversation or a series of conversations. This use of **dialogue** does create some interest in the materials. But there is more to interest than this. Literacy workers should not simply replace all attempts at appropriate style with passages of conversation.

We cannot overstress the view that literacy materials should be written in an appropriate style. If the materials are designed to give information—as they are in many work-oriented literacy programmes—they must be easily understood. But at the same time they must be written in a style which is appropriate to the people. There is sometimes a tension between the need to communicate clearly and the need to communicate expressively.

Here are some linguistic differences between the two types of style we have been talking about—the informative style and the literary style. These are general differences, not the specific differences that each language determines.

1. **High and low frequency.** The informative style usually makes use of words of very high frequency with the addition of infrequent specialized or scientific words. The literary style tends to make use of words which are less frequent and which are not technological in nature. This means that the informative style can be easier to understand clearly if the specialized words are carefully explained. The high frequency words are, as you will remember, those which bring about little emotional response. As a result materials written in the informative style tend to be linguistically uninteresting.
2. **Modern and archaic words.** Materials written in the informative style tend to make use only of modern words—those which are currently in use. On the other hand, the literary style often makes use of older archaic words. These words were perhaps once common, but they are not common any longer.

3. **Single and double meaning.** The informative style of writing attempts to use words which make a single meaning clear. Informative writing attempts to be unambiguous. Yet the literary style of writing often uses words with two or three meanings; there is, in fact, often deliberate ambiguity or double meaning. This is certainly true of many animal fables, folk tales, songs, poetry, riddles, etc., where there is often supposed to be a hidden significance behind the more obvious meaning.
4. **Common and unusual combinations.** In addition, informative writing tends to make use of words which frequently occur together—words which operate well together semantically. The literary style of language often makes use of strange combinations of words. It uses words which are not normally used together in order to create a special effect. In fact, this is often one of the most deliberate goals of literary style—the creation of new combinations of words which bring about a pleasing emotional response from the reader.

In addition to the above there are, of course, other characteristics of the informative and literary uses of language. And the differences often vary from one language to another. It is necessary for the literacy worker to know something about the literary style of the language in which he is working. If the language has not been written before, the literary style will be that of oral literature—of tales, songs, puzzles, riddles. If the language has been written for some time, there will normally be authors who are considered to have good style. One must come to an understanding of what this style is like.

Literacy materials should be written in the style that is demanded by the language, by the reader and by the content of the materials. The content will often demand the primary use of the informative style. The readers and the traditions of the literature will often demand a literary style. The literacy worker must come to some solution to meet these contrasting needs.

QUESTIONS

1. *Do you know the characteristics of literary style in your home language?*
2. *Which of the following themes would be difficult to write about in literary style? How to grow soy beans; The problems of over-population in towns; The importance of precision in measurements; Nutritional problems due to adapting to new food patterns in towns;*

Personal problems due to changing courtship patterns; A national hero.

Summary of suggestions

Chapter 5—Producing literacy materials: What this chapter is about; The sound system and the production of literacy materials; The syntactic system and the production of literacy materials; The semantic system and the production of literacy materials; Style and the production of literacy materials; SUMMARY OF SUGGESTIONS.

I. Phonological structuring of literacy materials

1. List all the phonemes of the language.
2. List the rules by which phonemes may be joined into syllables.
3. If the total number of syllables is small (less than 500), use the syllable as the basic unit for structuring the materials; otherwise use the phoneme.
4. Determine the order for introducing the units:
    - (a) Introduce the more frequent units first.
    - (b) Make a list of letters which look alike. Do not introduce these look-alikes at the same time. Give drills for distinguishing the look-alikes once they have been introduced.
    - (c) Make a list of the areas in the spoken language where there is conflict with the written language. Do not introduce new units for the first time in these areas of conflict.
    - (d) Teach simple frequent forms of punctuation first. Avoid more complex forms until late in the course.

II. Syntactic structuring of literacy materials

1. Teach new units in lexical morphemes first.
2. In some languages teach grammatical morphemes as sight words. (Do this when the grammatical morphemes have complex or unusual phonological structures.)
3. Use informal language at first. Later add more formal structures.
4. Make a list of written grammatical structures which are not common in spoken language. Do not teach these until late in the course. But do teach them.
5. Use redundancy wisely.
6. Make a list of the grammatical structures in the language which are difficult to read. Teach these later in the course.
    - (a) Avoid, at first, archaic words; words with high morpheme

complexity; embedded clauses; long words; and long sentences.
   - (b) Use readability formulas as aids in determining difficulty, if the formulas exist.
   - (c) Grade materials into initial primers and follow-up materials according to syntactic difficulties.

III. Semantic structuring of literacy materials

1. Use specific words to create interest. (This means avoiding exclusive use of highly frequent words.)
2. Be concerned for connotative meanings and the emotional responses which words might produce.
3. Use traditional means of starting and ending discourse.
4. Use traditional means of transitions between semantic units.
5. Use paragraphing based on natural text blocks.
6. Be careful about unnatural repetition of words designating old information; use proper substitute words.
7. Treat the characters in each lesson as new information.
8. Be careful with time-relationships.
9. Decide on an appropriate role and attitude of the author.
10. Use semantic content which is meaningful to the lives of the intended audience.
11. Select keywords carefully:
    - (a) Discuss with and listen to people to identify suggested keywords.
    - (b) Test the emotional impact of suggested words with a semantic differential inventory test.

IV. Stylistic structuring of literacy materials

1. List the characteristics of informative and literary style in the language.
2. Be concerned with literary style. Incorporate its features as much as possible.
3. Adjust the style to the topic of writing.
4. Teach specifically the reading of bureaucratic style.
5. Grade materials into initial primers and follow-up materials according to various styles.

CHAPTER SIX

Literacy and change

How to use this book; What linguistics is all about; Choosing the language for literacy; Developing a written language; Producing literacy materials; LITERACY AND CHANGE; Linguistics and communication; Special problems in literacy; Literacy and language-learning.

What this chapter is about

It is very rare that adult literacy workers have been interested only in the formal processes of reading and writing. Although there may be some satisfaction in accusing literacy programmes of the past of lack of interest in what happened to the newly literate, in actual practice most literacy programmes have always been concerned with what happens to the individual and society. Literacy workers have always talked of 'opening up new worlds', 'developing a new view of life', 'seeing new men' and more recently of 'raising one's consciousness'. How is linguistics related to this aspect of literacy?

It is from the area of semantics that linguistics has something to say about what I will call life-view.

The major concern for many literacy programmes, whether they are functional literacy programmes or not, is change. This implies, among other things, change in the individual's thinking. From a linguistic viewpoint this involves change in the semantic component of the newly literate person's language.

If the pre-literate person had the view that large families are always good, and if the newly literate person now has the view that smaller families are at times best, there has been a change in his semantic structure.

If the pre-literate person knew nothing about measurements such as metres or centimetres, and if the newly literate person is able to think in such terms, there has been a change in the semantic structure.

You will remember something that I said earlier about semantics. I said that linguists do not yet have a deep understanding of the semantic component of language. Therefore, you can be sure that not all linguists will agree completely with what I say below.

The semantic framework

Chapter 6—Literacy and change: What this chapter is about; THE SEMANTIC FRAMEWORK.

(Before your read farther: Do you remember what 'objects', 'events', 'abstracts' and 'relationals' are? If not, go back and review the third part of Chapter 5.)

The semantic component of language is difficult to understand for one major reason—the relationships between semantic units are very complex. If all relationships were in a hierarchy of **general to specific,** things would be easy.

living being	more general
animal	
mammal	
primate	
man	more specific

Or if all relationships were a matter of the **presence or absence of certain features,** things would again be easy.

woman = + animate
+ human
+ female

man = + animate
+ human
- female

But things are not as simple as that.

Here is one model of what the semantic component of language might be like.

Have you ever seen an old fishing net that has often been repaired? If so, you will remember that there are many points of contact where different strings come together into knots. If it has been badly repaired it will not look very neat. It may look something like Figure 6.

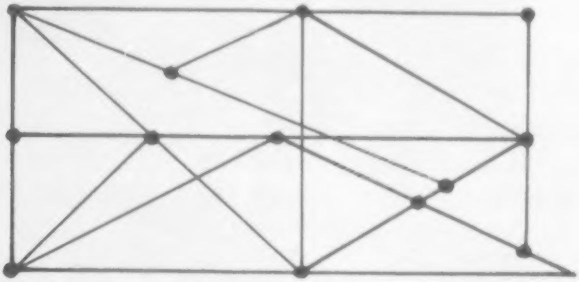


FIGURE 6. *The 'fishing net' model of the semantic component*

Now imagine that the net has been folded over in the sand. There will be many layers with strings touching in a very complex pattern. Now imagine that over the years the net has been dyed with many different colours and that there has been folding in different places. The whole net is of many colours in a complex pattern.

This is similar to the types of relationship which exist in the semantic component of language. Imagine that the semantic units (objects, events, abstracts) are the knots of the net and that relationals are the strings. The different colours that affect the whole net are emotional connotations which differ for all parts of the net. As the net is constantly changing with repairs and fading, so too does the semantic component of language change. Of course, this is not a complete picture of the semantic component. It is too simple and there are many faults that one can find with the idea of a net. But the example does illustrate the basic nature of the semantic component.

Here are some things which can happen to the semantic component with changes brought about by a literacy programme.

Adding new concepts

New concepts (semantic units) might be added to the network. But new concepts cannot be added in a vacuum. They must be tied into the net somewhere. An obvious example of this is the addition of new technological concepts—perhaps measurement in metres and centimetres.

When people who are accustomed to inches and feet are taught metres and centimetres, they at first say, 'I can't think in centimetres. How many centimetres make an inch?' Notice these things:

1. The new concepts have been explained.
2. The people have a general understanding of the new concepts.
3. The people cannot think in terms of the new concepts at first.
4. The old concepts have not disappeared.
5. People try to interpret the new concepts in terms of the old ones.

Many literacy programmes that try to teach new concepts fail because the literacy agents think the following:

1. The new concepts have been explained and generally understood. Therefore people can think in terms of the concepts. (This is a false view.)
2. The new concepts have been taught. Therefore the old concepts have disappeared. (Another false view.)
3. The new concepts are very different from the old. Therefore people will not interpret the new concepts in terms of the old. (Still another false view.)

With frequent usage, new concepts can become a true part of a person's semantic structure. But there is often not enough usage in a literacy programme for this to happen.

Sometimes when new semantic units are added they do not have the effect that was desired by the change-agents for the following reason: semantic units are not all connected in the network. (Some people have spoken of this problem in a non-linguistic way as **compartmentalized thinking.**) When new concepts are added, they do not necessarily relate to all of a person's former semantic structure. Here is an example of what can happen.

The literacy change-agent might be concerned with teaching advanced planning of one's activities. He might teach advanced planning in relation to a new activity, such as a new method of farming. But even if this is taught successfully, it is very possible that the concepts involved with advanced planning will be limited to the new farming method. Within the semantic framework, relationships with advanced planning have been built only to farming. If we use the model of the fishing net, the new knots are tied to only one part of the net.

New emotional responses might develop

You will remember that words and semantic units often bring about emotional responses. (Remember that words are grammatical units, not semantic units.) One aim of literacy programmes is to change the emotional responses to certain semantic units. This is certainly true in most programmes designed for consciousness-raising. Semantically this is done as follows.

There are semantic units which we might label witn words as 'good', 'bad', 'just', 'unjust', etc. And these units are linked by relationals to other semantic units.

For example, the semantic units relating to a particular food might be tied to a unit such as 'good'. A type of economic system might be tied to a unit such as 'unjust'.

Consciousness-raising literacy programmes are often concerned linguistically with forming new links of this type or of strengthening old links.

In such programmes, great concern is made on finding the **keywords** for teaching. The keywords normally have these characteristics: (a) they are related semantically to a set of semantic units which, the change-agents believe, should be tied to other units such as 'just', 'unjust', etc.; (b) phonetically they can be divided into syllables or phonemes in a way that allows for easy teaching of reading; (c) they are well-known words in the vocabulary of most illiterate people; and (d) they are words which can be easily represented by pictures.

The teaching process in this approach usually has two main parts.

1. **Consciousness-raising.** Pictures are presented which portray the keywords. The words are identified from the picture content. By guided discussion involving teacher and pupils, an attempt is made to establish links between that word and the emotion-producing concepts 'bad', 'unjust', etc. This is the semantic 'consciousness-raising' aspect of the teaching process.
2. **Reading.** The keywords are presented as written units and are analysed phonetically into phonemes, syllables, etc. Other words may be built up from these phonemes and syllables. This is the 'reading' aspect of the teaching process.

It is not within the framework of linguistics to determine successful and unsuccessful methods of developing relationships between semantic units. It would appear, however, from the discipline of psychology and attitude study, that discussion is not the best means of establishing permanent links between emotion-producing concepts and other semantic units.

Changing, weakening and strengthening emotional responses to semantic fields is a very complex process. Many literacy programmes with a consciousness-raising goal do not achieve the desired success. This is often because the literacy workers underestimate the complexity of their task. In addition, too much dependence is made on discussion around keywords. Other techniques useful in producing semantic change are ignored.

Old concepts might become dominant again

You will recall that when new semantic units are added to the semantic component, the old units do not necessarily disappear. Principles of learning suggest that individual semantic units can be dominant or weak to various degrees. A dominant unit is one that is easy to recall and which may produce a strong emotional response. A weak unit is just the opposite. We all know that things once known well can easily be forgotten and that things we once reacted strongly to might in time produce almost no response.

Literacy workers consciously want to bring about change—in the individual and often in society. But literacy workers often do not distinguish between **temporary change** and **permanent change.** Again most literacy workers realize that new literates can forget the skills of reading, writing and arithmetic. They realize that constant usage of those skills after literacy instruction is necessary to maintain them. For this reason many literacy programmes have elements of post-literacy reading—the 'follow on' or 'bridge' materials are often produced.

Literacy workers should keep the following factors in mind:

1. The semantic component of language is not rigid. It is constantly changing.
2. Change in the semantic structure of an individual can be in the direction of forgetting as well as learning.
3. Attitudes and emotional responses can be forgotten as well as learned.
4. Semantic units, attitudes and emotional responses learned early in life are probably most resistant to fading or forgetting. Those learned later in life are often most unstable and least resistant to fading.
5. Constant reinforcement of semantic units, attitudes and emotional responses learned later in life is necessary to prevent their fading.

All of this might seem very theoretical. In practical terms it means this: literacy programmes often have temporary success but produce little lasting change. This is because new concepts tend to fade and old concepts regain dominance. Teaching of reading of new semantic units would not be enough. Multiple strategies that reinforce this new learning would be necessary.

QUESTIONS

1. *Sometimes people taking part in a group discussion seem to have a*

particular attitude. But later on in other circumstances they seem to have a quite different attitude. How can this happen?

2. *Do you remember when man first walked on the moon? When you think of the moon now, do you think of it as a place where people can walk, make shadows, etc., or do you think of it as a distant object which waxes and wanes in the sky? How strongly has your semantic structure relating to the moon changed since men first walked on the moon?*

CHAPTER SEVEN

Linguistics and communication

How to use this book; What linguistics is all about; Choosing the language for literacy; Developing a written language; Producing literacy materials; Literacy and change; **LINGUISTICS AND COMMUNICATION**; Special problems in literacy; Literacy and language-learning.

What this chapter is about

The literacy worker at all levels is concerned with communication. There is verbal communication with pupils, teachers, supervisors, etc. There is written communication throughout a literacy organization in addition to the teaching of the skills of reading and writing. In fact, some national organizations use literacy programmes, in part, as a means of communication between government agencies and people.

This chapter is concerned with the relationship between literacy and communication. But remember: communication is far more than language, and linguistics is only one discipline concerned with communication.

The chapter begins with a discussion of meaning and communication. Second, there is a discussion of the functions which language fulfils; for the conveyance of information is only one function of language. This is followed by the major orientations which communication might take. The fourth section deals with typical patterns of communication, and the chapter concludes with a discussion of some additional barriers to communication.

Meaning and communication

Chapter 7—Linguistics and communication: What this chapter is about; MEANING AND COMMUNICATION; Language functions; Communication orientations; Patterns of communication; Barriers to communication.

It is a misunderstanding for people to see language as only a means of conveying information. Language has other functions and these are described in another section of this chapter. But language is certainly concerned with a transfer of meaning. In this sense, all the components and structures of language can be seen as a device to enable this transfer of meaning to take place. In the following section I will speak mainly of the person who is sending a message, not the one receiving it.

You will remember that languages often have different dialect forms. Dialects are language forms — spoken by a number of people — which are similar enough to allow communication to take place but which do have clear differences. But, in fact, no two individuals have exactly the same language knowledge. There are always differences, even among people who speak the same dialect. This language of a single individual is called an ideolect. No two ideolects are exactly alike. You will have a different ideolect from your parents or friends.

The amount of difference between ideolects of the same dialect is not the same for all language components. The phonological component is very similar among all ideolects of a single dialect. You cannot very easily have your own set of sounds and sound rules which differ greatly from that of other speakers. This tends to be true for the syntactic component as well. The syntactic components of different ideolects vary more than the phonological components, but the variation is still fairly limited.

But the semantic components of various ideolects can vary tremendously. For example, you may know a lot about a subject such as economics. I may know nothing about economics and may have no semantic framework of dealing with concepts of economics. Within our semantic components we can differ greatly.

This lack of fit between the semantic components of ideolects of the same language is one of the major causes of poor communication. You probably remember a question asked earlier in this book — 'Have you ever argued with someone about whether a particular colour is green or blue?'

The reason that such an argument could take place is that your semantic structure relating to colours is slightly different from that of your friend. Good communication (using communication here to mean a transfer of meaning) cannot take place when one person assumes that his semantic structure is the same as that of another person. Thus, to communicate well, a person must do the following:

1. He must make sure that he and others involved have **the same general semantic structure** concerning the topic of communication. Teachers often do this by teaching the basic concepts involved. A committee chairman may do this by making a summary of the issues. A textbook writer will do this by making formal definitions so that there is no misunderstanding. People conducting a course may do this by stipulating a certain basic knowledge for everyone entering the course. Any public communicator will do this by planning his communication to the particular background of his audience.
2. He must get 'feedback' from the person with whom he is communicating. **Feedback** is the response from participants in communication which allows each to know whether there is continuing agreement as to meaning. In face-to-face communication this feedback can be in various forms: nods, smiles, frowns; questions such as 'what do you mean by that?'; or simple statements such as, 'Yes, I understand'. Without constant feedback, participants in communication do not know if there is still mutual agreement about meaning.
3. He must make sure that there is mutual agreement at the end of the communication. This is often done by summarizing or asking directly about agreement. He may say things such as: 'Now let us see. Here is what we have decided . . . .'; 'Does everybody understand what has been discussed?'

You can certainly see that, the more distant people are from one another, the more difficult it is to communicate well. For it is then difficult to start with the same meanings, to ensure feedback during communication and to get agreement over meaning at the end. Large literacy programmes with centralized functions often find it difficult to communicate well for these reasons. On the other hand, small 'grass-roots' movements are often successful. A grass-roots movement has the environment which facilitates good communication.

In the above I have talked about meaning as if meaning were purely denotative. But language also has **connotative meaning**—it brings about emotional response. The effective communicator must be aware of the possible connotative meanings as well as denotative ones. Connotative meanings can differ from one dialect or ideolect to another. These differences in meanings clearly indicate that a communicator is or is not a member of a particular group. In different groups, for example, a word such as 'capitalist' might be related to opposite connotative meanings. In writing this book I had to decide whether to use the word 'teacher'. For to some people this will imply that I am old-fashioned, considering the teacher to know everything, wanting to maintain the status quo. A more acceptable term might be 'facilitator' or 'change-agent'. To gain acceptance, a communicator must normally use the same connotative meanings as others involved in communication. One of the major reasons why it is difficult to communicate well in a foreign language is that one often does not know the connotative meanings of that language. And one of the major problems in translating is that it is often difficult to translate equally well the denotative and connotative meanings of language.

There is a familiar saying in English—'It's not what you say but how you say it.' In fact, when people have disagreed and argued, this phrase can often be heard. 'It wasn't what he said, but how he said it that made me angry.' There is more to language than 'what one says'. There are tones of voice, facial expressions, attentiveness, degree of formality, etc., which give special meaning to the words a person speaks. These aspects of language are called **paralanguage.**

The communicator often finds that he has two basic tasks: (a) to gain acceptance for himself; (b) to gain acceptance and understanding of his message.

The effective communicator, as opposed to the ineffective one, is often the person who gains acceptance for himself. This is done in spoken language by the skilful use of paralanguage. We can see this easily in a good actor. An actor is basically a person who has a high degree of control over paralanguage. The actual words he uses are supplied to him by someone else. It's not only what he says but how he says it that is important. The body actions, facial expressions, tone of voice, etc., are what make a good actor. In similar fashion, these same features help to make the effective communicator in that they can gain acceptance for him and his message.

There is a form of paralanguage in written communication as well as spoken communication. The features of paralanguage in writing are basically what is called 'layout'. Layout can consist of a number of things: whether the printing is by hand or by machine; whether it looks neat; the amount of empty space left on a page in relation to writing; type size, etc. The paralanguage of writing is just as important as the paralanguage of speaking. Here is an example. Suppose that you have written a book and want to get it published. You can send in a handwritten copy full of corrections and somewhat dirty, or you can send a clean, neatly typed copy. Which do you think is more likely to be acceptable to a publisher?

Here is a different example. An old friend of yours is now an important government official. You write him a personal letter. You receive a brief reply, typed on official paper, in formal language, and addressing you as 'Dear Sir'. Would that make you happy or angry?

QUESTIONS

1. *Suppose that a trainer of literacy teachers tells the teachers that they are the most important members of the literacy team. But during the training, the trainer pays little attention to suggestions made by the teachers. When teachers make mistakes, he is sarcastic. (a) Which will the teachers believe—the words "the teachers are very important" or the paralanguage which he has used in dealing with the teachers? (b) If the language and the paralanguage used by a person contradict each other, which will listeners believe—the language or the paralanguage?*
2. *Why is it important for a discussion leader to summarize at the end of a discussion the decisions which have been made?*

Language functions

Chapter 7—Linguistics and communication: What this chapter is about; Meaning and communication; LANGUAGE FUNCTIONS; Communication orientations; Patterns of communication; Barriers to communication.

The last section looked at language as if its only functions were to transfer meaning—denotative or connotative. But you know quite well that language has other functions. Different linguists give different lists of these functions. (The different lists result mainly from the different semantic frameworks of the linguists.) But most of the lists contain the following types of function:

1. Transferring meaning—we have already discussed this.
2. Showing acceptance of others. Suppose you and a stranger sit beside each other on a public bench. You can normally do one of two things: (a) you can pretend that the other person is not there; or (b) you can recognize the other person and indicate that you accept him as a human being. If you choose the second way of behaving, you will indicate your acceptance of the other by talking to him. It is not so important **what** you say; rather, **if** you say it and **how** you say it. In many languages you will probably talk about the weather. You are not

transferring meaning content. You are showing acceptance of the other person. In most languages, simple greetings are basically means of showing acceptance of the other person.

3. Getting people to do things. Often communication functions to get people to do things. This can be a simple request or command—'Please open the door'. Notice that communication with this function is neither true nor false. For its intention is not to relay information.

   There are people who communicate poorly because they are too abrupt or impolite in asking others to do things. Once again it is not only what one says, but how one says it, that brings about effective communication.

   In some situations and languages a straightforward request or command is considered impolite or harsh. A senior secretary, for example, may be hurt if she is told abruptly—'Type this letter now'. But she will probably not be upset if one says—'Would you type this letter now?' Notice again that one is not really asking a question to get information. One is telling the secretary what to do.

4. Stopping communication. People use language to stop communication. This can be done openly by such phrases as 'Please stop talking'. But it can also be done by a laugh, a facial expression, a tone of voice. Teachers are sometimes accused of not allowing others to express themselves. Teachers will only rarely say 'No-one is allowed to express an opinion'. But by paralanguage the teacher may well stop others from participating. Even in classes where emphasis is supposedly on group discussion and participation, teachers can easily put an end to communication. The effective communicator is one who can control his paralanguage in a way that will encourage communication to take place.

Communication orientations

Chapter 7—Linguistics and communication: What this chapter is about; Meaning and communication; Language functions; COMMUNICATION ORIENTATIONS; Patterns of communication; Barriers to communication.

Much of what has been said so far in this chapter points out two basic orientations in communication: (a) communication has a social orientation—it is involved in the relationships between people who are communicating with each other; and (b) communication has a goal orientation—

it is involved with transferring information or with getting people to do things. Both of these orientations exist at the same time.

There has been research in some countries into communication in nonformal task-orientated situations. It appears from this research that, where a group of people are communicating freely, two people tend to do most of the talking and represent the **two extremes of orientation.** One of these people does about 40 per cent of the talking and the second about 20 per cent. (How true this is for all cultures has not been determined.) One of these two usually has a predominantly social orientation in his communication; and the other has a predominantly goal orientation. The others vary in their communication in relation to social and goal orientation. There are also a few people who are basically communication stoppers. When asked an opinion, they say they have no opinion. Usually they sit, saying nothing.

Here are some typical types of behaviour of the above communication orientations.

Social orientation: (a) positive: jokes, laughs, agrees, shows satisfaction; (b) negative: over-formal, defends self, disagrees frequently, belittles others, shows dissatisfaction.

Goal orientation: (a) questions: asks for information, opinion or suggestion from others, asks for summary or repetition, etc.; (b) answers: gives information, opinion, suggestions, gives summaries, etc.

Communication stoppers: says he knows nothing, does not laugh at jokes, does not look at others, few facial expressions.

Some businesses and industries have found that they can give **training in group communication** to people by using something like the above framework. They get the trainees to discuss a problem or plan an activity. Trained observers with tally sheets give each participant a mark for each type of communication he makes, each time that he communicates. In this way each person can see whether he makes negative social comments or how goal-orientated his communication is, etc. If participants decide they would like to change their orientation somewhat, they practise the new type of orientation.

In literacy training programmes, especially those of a consciousness-raising type, communication training of this type might be very useful.

QUESTIONS

1. *In most learning situations, are you more socially-oriented or more goal-oriented?*

2. *What do you do if you are in a meeting and people seem to be wasting time by discussing unimportant issues?*
3. *Do you think that the administrators of a literacy programme should spend some of their time dealing with the personal relationships of work subordinates?*

Patterns of communication

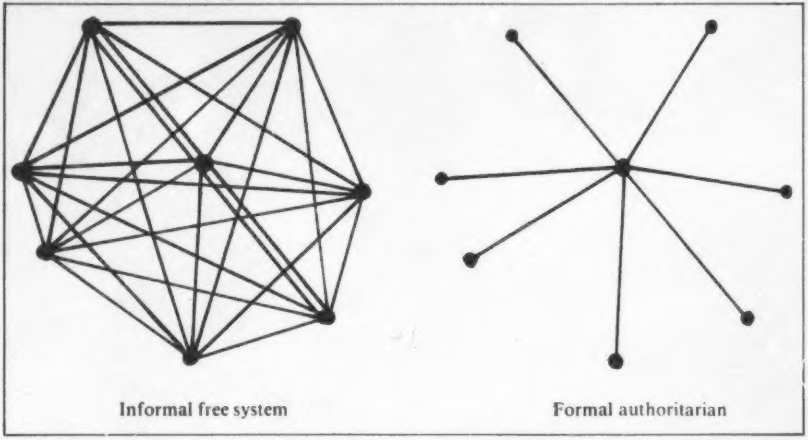
Chapter 7—Linguistics and communication: What this chapter is about; Meaning and communication; Language functions; Communication orientations; PATTERNS OF COMMUNICATION; Barriers to communication.

There are a number of different patterns of communication which are possible. At one extreme the structure might be very **informal** and free with no recognized authority. An example of this might be the communication that takes place at a large informal party. People might move around talking about many different topics. This communication is basically socially orientated with very little, if any, goal direction. Some people hate being in this type of communication situation. They complain that no-one is really saying anything—that it is senseless chatter. Of course, they are right. For in this extreme situation the concern is totally for social relationships. No-one is really trying to convey information or get a task performed. The point, however, is that maintaining social relationships is important.

On the other hand the structure may be very **formal** and authoritarian. One person may be in charge and he may control and dominate all communication that takes place. This communication may be very goal directed, with little concern for social relationships. The social relationships have already been determined by the formal structure.

Figure 7 shows how these communication systems can be represented. Each dot represents a person and the lines show who may speak to whom. The authoritarian system is often even more formal than that illustrated. It can have a whole chain of people each at different distances from the central authority. It looks like Figure 8. A may talk to B, and B may talk to D. But A and O never talk together. And if A wants to talk to D, he must go through B to O. O will then go through C to D. This is an extreme example of the communication which may take place in a large organization such as a bureaucracy.

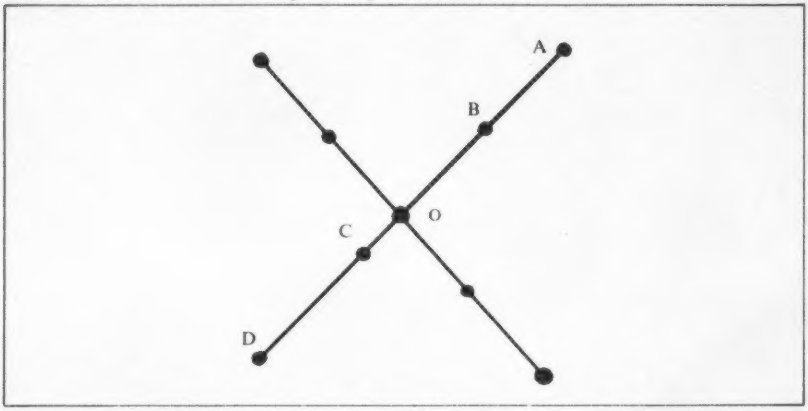
FIGURE 7. *Patterns of communication*



Informal free system

Formal authoritarian

FIGURE 8. *A bureaucratic system of communication*



Of course the question arises, 'Which type of system is best in literacy programmes?' Older traditional teaching systems are often accused of having a formal authoritarian structure with teachers at the hub of the class situation. These teachers are said to dehumanize the situation with their authoritarian social relationships. Traditional programmes accuse the less authoritarian programmes of being so informal and free that no-one ever learns anything. Is there an answer?

I am assuming here that literacy programmes are, in part at least, task-oriented. Research into task-oriented communication groups indicate the following.

Informal free systems produce group solidarity. The participants are more happy with their personal roles within the group, and they feel more prepared to express their views and needs. However, these systems are slower to get tasks (other than social relationships) done. If the group contains people with strong task orientation, those people become dissatisfied. They will often drop out of the group and call it a waste of time.

Formal authoritarian systems get more tasks done more quickly. People who are task-orientated get satisfaction here and see reward in getting the tasks done. But at the same time other, less task-oriented, people become dissatisfied with the social relationships and their own places in the system. The farther from the hub people are, the more dissatisfied they tend to become. This dissatisfaction also brings about drop-outs.

In my view, a literacy programme must have elements of both systems. For social relationships and task accomplishment are both necessary. In societies where social relationships are already highly free and informal, people are often disturbed by anything with the appearance of authoritarianism. Yet, in these same societies, people are often secure enough voluntarily to accept limited authority in order to accomplish a task. In authoritarian societies, people often become insecure with informality and freedom. These may be the domesticated people that some educators speak of. On the other hand, some of these will become new people in a more free situation. These are the very people who most need a free communication environment. But no extreme system will meet the needs of everyone.

Also in my view, many of the problems of literacy programmes in the last decade or so are related to these two extreme types of communication system. The more rigid programmes have taught people to read, write and do simple arithmetic. But they have done little to help people form a creative awareness of their world and their place in the world. They have not helped people to develop new forms of human relationship. Meanwhile, some very free programmes have helped in forming new patterns of relationship and some degree of critical awareness. But progress in reading, writing, arithmetic and economic skills has often been poor; and often critical awareness has been very vague and general.

QUESTIONS

1. *Do you think that a formal communication system has any part at all*

to play in a literacy programme?

2. *In a new literacy class where the pupils are accustomed to authoritarian communication patterns, how can you help them to feel at ease with a more informal pattern?*

Barriers to communication

Chapter 7—Linguistics and communication: What this chapter is about; Meaning and communication; Language functions; Communication orientations; Patterns of communication; BARRIERS TO COMMUNICATION.

Everything that we have talked about so far in this chapter can be related to barriers to communication. For example, if people have different semantic structures, this will create a barrier to communication. All other topics of the chapter—poor use of paralanguages, the assumption that all language is used for conveying information, communication situations where there is over emphasis on social orientation or goal orientation, extreme types of communication system—can all produce barriers to good communications.

In this section we will deal with three more barriers to communication. These have been hinted at in other places in the book, but they do need to be looked at specifically. These three barriers are: (a) the lack of feedback in communication; (b) the rate or speed of communication; and (c) confrontation situations in communication.

Lack of feedback in communication

We mentioned before that it is important for a person who is communicating to get some idea of whether he is being understood. He needs to know whether people agree with him or disagree with him, whether he has said something incorrect, etc. He must have feedback from others.

Here is **an exercise on feedback** which is often used in communication courses to emphasize how important feedback is.

From a group, one person is chosen to describe a picture. The picture is turned away from the group and the person describing it stands where the group cannot see him. The person then describes the picture to the group; each person in the group has a piece of paper and a pen and must draw the picture that is described to him. There are two different situations for describing. In the first situation no-one in the group is allowed to ask questions—that is, there is no feedback at all. The person describing the picture is not allowed to look at the group; he does not see when they are having problems and when they are not having problems. He simply describes.

In the second situation, the person describing the picture is allowed to look at the group, and members of the group are allowed to ask questions at will. There is as much conversation between describer and group as is needed.

At the end of this experiment there is a discussion of what people have learned from the presence of feedback and the absence of feedback. Here are some things that usually come out of these discussions.

1. The success in drawing the picture is almost universally greater when there has been feedback. More communication has taken place more effectively.
2. There is greater success in drawing the pictures when there are exact terms for the objects in the pictures. Thus, if the pictures contain squares or circles, it is easy to describe these; but if the pictures contain abstract shapes which have no specific name, then it is very difficult to describe these. This points out the importance of a common shared terminology in communication.
3. The people who are drawing pictures in the situation without feedback become frustrated. Some of those in larger groups begin to drop out. They remove themselves from the communication situation by refusing to take part. Others become angry with the person who is describing the picture; they feel that he is doing a very poor job and they feel that they could do better. On the other hand, when feedback is allowed, frustration tends to be less; there tends to be much joking and informal condemnation of the describer during the feedback period. In this way some of the tension is removed from the situation. People can still get upset with the describer; but, if so, they are able to tell him he is not doing a good job, that he is inconsistent in what he is saying. The social relationships become more relaxed.
4. From the point of view of the describer, there is often a feeling that a good job has been done when there has been no feedback. The describer believes that he has been accurate and helpful and that communication has taken place well. When there has been feedback he sometimes gets upset with all of the questions that are asked. He does not understand why people cannot understand what he is saying.
5. One of the final things learned is the amount of time involved. Communication without feedback can usually take place quite quickly; communication with feedback takes a longer time. People who are very goal- or task-oriented sometimes think that this extra time

is wasteful. However, the greater success in drawing the pictures in the feedback situation demonstrates that it was the time used in communication without feedback that was the real waste. For the task has not been properly performed despite the time used.

Speed of communication

The effectiveness of communication depends upon the speed of communication. By this I do not mean basically the number of words that a person speaks in a minute, although this does play a role in effectiveness of communication. Rather, I am talking here primarily of the speed with which new information is introduced. Where the conveyance of information is important, there will be little effective communication taking place if too much information is presented too quickly. This is one of the reasons why redundancy is important in communication.

The speed of presentation is especially important when the topic of communication is concerned with relationships between things. **Speech is linear;** one begins at the beginning of a sentence and ends at the end of a sentence or group of sentences. It is impossible within a linear framework to indicate accurately all types of simultaneous relationship. The receivers of the information must have an opportunity to think and to try to visualize what the relationships are. This is why it is so important to use graphic visual aids to communication when one is concerned with relationships.

You have probably heard the saying that 'one picture is worth a thousand words'. This is true in certain situations; it is basically true where one is dealing with simultaneous relationships. Recall what was said above about the experiment with drawing pictures. If, instead of having someone describe the pictures in the experiment discussed, we had simply shown the pictures to the people, there would have been amazing accuracy in reproducing the picture. Probably the worst of the reproduced pictures in this situation would have been better than the best of pictures produced from a description. This points out the fact that visual communication is particularly important when there is a great deal of information which must be presented at once and when this information relates to simultaneous relationships between the bits of information.

Some teachers and public speakers can be justifiably condemned for trying to impress their audiences. They try to present so much information at one time that all the audience can do is sit with a notebook and try to write down all the information before it is lost. This is the problem with a lecture system of education. It is most efficient in terms of conveying words from one person to another, but it is efficient only if note-taking becomes the predominant activity. Then there is no time or opportunity for feedback or the other types of communication situation which bring about effective communication.

The confrontation situation

Often communication takes place between groups of people who are in conflict with each other. The conflict may vary in intensity from a major war situation to a slight disagreement. However, the pattern of communication in the confrontation situations tends to be the same even though the intensity of the confrontation is different.

Here are some things which happen to **groups in conflict:**

1. The individuals within the groups in conflict expect more authority from their leaders. Thus the communication systems resemble the rigid authoritarian system. People voluntarily undergo greater submission in the communication framework.
2. Individuals within the groups in conflict demand more conformity among the members. The comments and statements that are made tend to be more and more alike. In addition, there is a large amount of socially-oriented language of a positive nature within the group—that of agreeing, of building up the group, of strengthening the group solidarity.
3. Groups in conflict develop a win or lose approach in their communication with the other group. Communication tends to take on the nature of a battle, each side tries to win rather than to establish a mutually acceptable solution to problems. Thus the communication between groups in conflict tends to be of an aggressive-defensive nature.
4. The conveyance of information and transferred meaning between groups in conflict becomes of less and less importance. People do not listen to the information presented by the other side. In its place the communication tends to take on the greater social orientation of the aggressive-defensive nature mentioned above. (Thus, in trying to improve communication between groups in conflict, it is usually not very helpful to talk about the facts, because people are not communicating in order to receive information. Helping people to deal with their opinions and their emotions is of more benefit in trying to work with groups in conflict.)

It may appear that the situation of groups in conflict has nothing to do with a literacy class, but this is not true. At any time when there are a number of people working together, different groups with different opinions can grow up. In a learning situation, where there is group discussion, it is possible for two conflicting groups to develop. In the administration of programmes it is possible for conflicting sub-groups to spring up. Within an organizational framework it is possible for people on a regional level to develop conflict situations with people on a national level. Often these conflicts are not brought out into the open but continue under the surface in all types of communication which takes place.

QUESTIONS

1. *Are there any places of confrontation between various sub-groups in the literacy programme in which you are presently working? Between the national office and regional offices? Between middle-level workers and teachers? Between more authoritarian teachers and more informal teachers?*
2. *What opportunities for feedback do pupils in your literacy programme have? About individual learning problems? About the goals of the programme? About the attitudes of the teachers?*

CHAPTER EIGHT

Special problems in literacy

How to use this book; What linguistics is all about; Choosing the language for literacy; Developing a written language; Producing literacy materials; Literacy and change; Linguistics and communication; SPECIAL PROBLEMS IN LITERACY; Literacy and language-learning.

What this chapter is about

There are a few special problems related to literacy and linguistics which need to be explained in more detail than could be given in the earlier chapters. This chapter will deal with a few of these.

You will remember that in an earlier chapter we mentioned that some linguists do not believe that the phoneme exists. If there is no phoneme, then alphabetic writing seems to be a bad idea. The first section in this chapter discusses this problem. It is necessary to give you some background information on one particular linguistic theory or else you would not be able to understand what the problem is about.

You may decide that this question is too technical and is out of place in this book. But most linguistic studies written today which deal with linguistics and literacy are written in terms of this theory. If you do not face the problem now, you will not be able to learn from these other studies.

A second problem deals with difficulties in learning to spell. Some languages have particular areas in which spelling is very difficult. A few types of area are discussed.

A third area which is discussed is the difference between learning to read and learning to write. We will try to see why people learn to read more easily than they learn to write.

A final area is the problem of teaching numeracy.

The phoneme and alphabetic writing

Chapter 8—Special problems in literacy: What this chapter is about; THE PHONEME AND ALPHABETIC WRITING; Learning to spell—formal difficulties; Differences between reading and writing; Linguistics and numeracy.

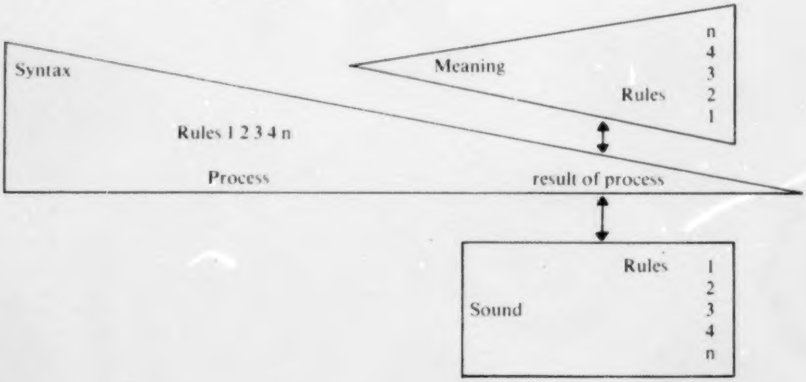
(Before you go farther: Do you remember what is meant by the 'phoneme'? If not, go back and read the section on 'theoretical linguistics' in Chapter 2.)

Most theories of linguistics today recognize a difference between what is called **surface structure** and **deep structure.** Surface structure is the language structure in the form in which it is normally heard. Beneath that surface structure is a deep structure which is more abstract. Surface structure is seen as being derived from deep structure. Most linguists, for example, would agree that the sound component of language is closer to the surface than the syntactic component.

One linguistic theory is particularly concerned with the difference between deep structure and surface structure. That theory is normally called Transformational Generative Grammar—or TG grammar. This theory does not recognize what has been traditionally called the phoneme.

The problem which is discussed below is a well-known one in linguistics. It has been so thoroughly discussed by linguists that most of them would be very unhappy to see it raised again in this manual. But it is not a familiar problem to most literacy workers. Therefore, with apologies to any linguists who read the manual, I repeat it here.

FIGURE 9. *The theory of TG grammar*



Look at Figure 9. In TG grammar, each component of language is a process of a large number (and several kinds) of rules. The syntactic component is seen as central. The rules start there. The sound component and the meaning component interpret the end results of the syntactic rules.

TG grammar sees **language as a process.** Within the deep structure of the syntactic component, every language has a simple structure which might be written as follows:

$$S \Longrightarrow NP + VP$$

(This can be informally read as: a sentence is rewritten as a noun phrase and a verb phrase.) From this simple starting point several complex series of rules convert this deep-structure rule to surface structure. TG grammar does not see the need to recognize anything in these rules which is the same as a phoneme. TG grammar does have a place in its set of rules for a sound unit called the **systematic phoneme.** But this is not the same as the traditional phoneme we have talked about in this book.

Let us look at an example which might help explain the TG grammar's approach to sounds. In Bantu languages nouns are divided into different classes according to the prefixes used with the noun root and according to other grammatical points. There is one particular class of noun which at times behaves rather strangely. The nouns of this class do not normally take a singular morpheme. But changes take place in the first consonant of the noun in the singular. These changes indicate that there is a morpheme for singular even though the morpheme does not occur on the surface. For example, in Sotho the root *bin*'sing' becomes the noun *pina,* and the root *bon*'see'becomes the noun *pono.* For many years it has been recognized that in languages similar to Sotho there is an unheard sound element usually written as N. Although the element is not heard on the surface, its influence exists in the otherwise strange behaviour of nouns. Thus the following rule occurs:

$$N+b=>p$$

In TG grammar an element such as N would occur as a systematic phoneme. At some point, after N had influenced the following sound elements, there would be a rule which removes N. In surface structure N never exists. One could not therefore call it a traditional phoneme. But at a deeper level N does exist.

What exists on the surface is not the only thing to be concerned about in language. In fact many grammarians would say it is the least important part of language.

But our concern is not completely a theoretical one. We are interested in the best methods to teach people to read and write. If the phoneme does not exist, should we continue using alphabetic writing? Perhaps we should try to have written symbols that represent systematic phonemes rather than traditional ones?

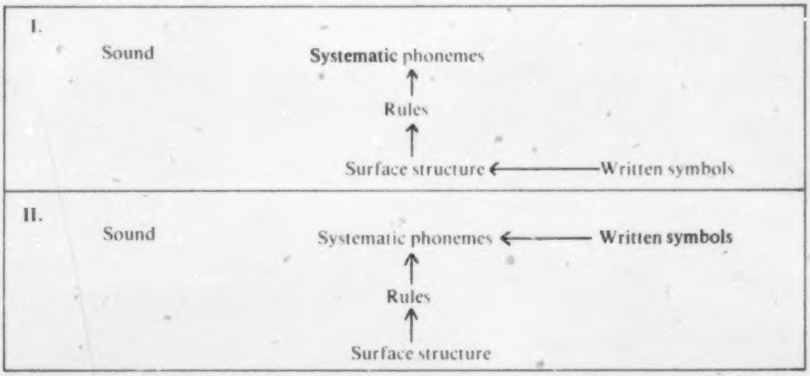
In order to answer this question, let us look at English. Many people have argued that the English spelling system is very complicated and difficult to learn. In fact, **special teaching alphabets** have been developed for writing English during the early learning stage. Later the pupils learn to read and write English with the normal alphabet. These special alphabets (and particularly the one called ITA=initial teaching alphabet) have proved to be very effective in teaching reading.

But, according to TG grammarians, the normal manner of writing English is the best possible writing system for English. For it is considered to represent closely the systematic phonemes of English.

This leaves us with **a problem.** The most widely accepted linguistic theory today—TG grammar—states that the normal way to write English is the best possible way. Yet the practical experience of many pupils and teachers would tend to indicate otherwise. And results of the use of special alphabets such as ITA would also indicate otherwise.

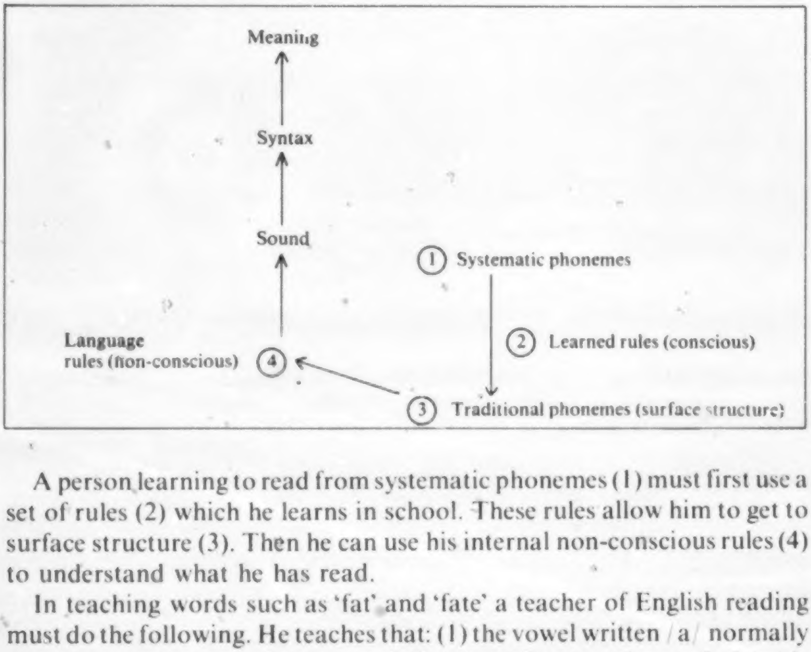
Here is my opinion. Although surface structure may be the least important part of language, it is still a part of language. Any attempt to write a language—English, for example—by omitting surface structure and going directly to deeper structure is **omitting part of the language.** People's direct contact with language is through surface structure. The traditional phonemic structure is the perceived surface structure. Look at Figure 10. The two diagrams show the sound component of language and two different ways of learning to read.

FIGURE 10. *Two different ways of learning to read*



If there are written symbols corresponding to surface structure, and if one knows the rules of the language, then one can interpret the symbols and receive meaning. But if one starts with written symbols for the systematic phonemes, one is **starting in the middle** of things. A person does not consciously know the rules that relate systematic phonemes to surface structure. And he cannot consciously think in terms of systematic phonemes. Thus, if one learns to read by graphemes representing systematic phonemes, a person must first try to relate these to surface structure. And then he must work back from surface structure to meaning. Figure 11 shows what happens.

FIGURE 11. *Learning to read from systematic phonemes*


Meaning
Syntax
Sound
① Systematic phonemes
② Learned rules (conscious)
Language rules (non-conscious) ④
③ Traditional phonemes (surface structure)

A person learning to read from systematic phonemes (1) must first use a set of rules (2) which he learns in school. These rules allow him to get to surface structure (3). Then he can use his internal non-conscious rules (4) to understand what he has read.

In teaching words such as 'fat' and 'fate' a teacher of English reading must do the following. He teaches that: (1) the vowel written /a/ normally has the sound /æ/ as in the word 'fat'; but (2) when the symbol /e/ is added, the combination /a+consonant+e/ is pronounced as /e^y + consonant/ as in the word 'fate'. Thus the teacher is teaching a set of rules to get from systematic phonemes to traditional phonemes. Next the pupil must use his own internal language rules to understand the meaning of 'fat' and 'fate'.

The difficulties of written English, French, and a number of other languages which have been written for a long time, come from the fact that the learner normally starts in the middle of things. First he must learn rules to get him to surface structure. Then he must use his language rules to get to meaning.

In such languages it can be even more difficult to write properly. For there is often a choice of rules from which one is expected to pick the correct one. Again we will use English as an example. If one comes across the written word 'fate', there is one rule which can be applied to get to surface structure. The rule is: a+consonant+e (written)=e^y+consonant (spoken). But starting from the surface there are a number of possible rules as shown in Table 2.

TABLE 2. ***Alternative spellings for English vowel sound***

Spoken	Written	Example
e^y + consonant =	a + consonant + e	fate
	ai + consonant	bait
	ei + consonant (g)	eight
	ei + consonant (n)	vein
e^y + no consonant =	ay	say
	ey	they

In writing English with the sound /e^y/, a person must choose which of the above rules to use. But he does not consciously know any rules (historical or linguistic) which will help him choose. He must learn all the individual words separately.

From the practical viewpoint of learning to read and write, it seems beyond question that alphabetic writing is superior to the writing of systematic phonemes.

QUESTIONS

1. *Which of the following English words have the same vowel sound in surface structure? deep—receive—star—chief—box—be—each—ask.*
2. *Do you know any other languages, besides English, where the graphemes represent something similar to systematic phonemes and not traditional phonemes?*

Learning to spell—formal difficulties

Chapter 8—Special problems in literacy; What this chapter is about; The phoneme and alphabetic writing; **LEARNING TO SPELL—FORMAL DIFFICULTIES; Differences between reading and writing; Linguistics and numeracy.**

One of the major problems that literacy students have is learning to spell the language correctly. Some languages give more difficulty with spelling than others. For example, a language in which the written symbols do not well relate to the phonemes will create difficulties in spelling. There are special difficulties which languages create with spelling. Let us look at some of these.

Historical change

One of the common problems is found with those languages which have been written for a long time. Often the language is no longer pronounced as it once was. Thus there are historical problems with spelling in such languages. If the pronunciation changes and the spelling does not change, then the spelling system will no longer fit the sound system. This is what has happened with French, English and a number of other languages. It is the type of situation which we have discussed above. It does not need greater detail here.

Neutralization

A second reason for spelling difficulties is a linguistic phenomenon called neutralization. In neutralization one or two phonemes in certain positions stop contrasting in sound with each other. Thus one sound is used for both of the two phonemes in such positions. For example, in German a /d/ or a /t/ at the end of a word is pronounced as /t/. We say that /d/ and /t/ are neutralized in word-final position. In such cases the person learning to spell the words is not sure whether the word should be spelled with a /d/ or with a /t/.

In some languages there are ways of finding out what the sound was before it became neutralized. For example, by putting some German nouns into the plural, the /d/ or /t/ no longer occurs at the end of the word. There is no longer neutralization and one can find out if the spelling should be /d/ or /t/.

But sometimes there is no way in the language to determine what the sound was before it became neutralized. A very clear example of this exists in the English vowel system. English has a set of rules by which a vowel which is unstressed becomes more central in pronunciation. In fact, with many speakers all vowels in unstressed positions become pronounced as either i (the last vowel sound in 'glass*e*s') or /ə/ (the last vowel sound in 'sof*a*') or a sound very similar to these.

Therefore, when a person comes across a word such as 'administration', he does not know how to spell the vowel in the third syllable. For the sound is normally pronounced /ə/. But all of the vowels in English can be neutralized to /ə/ when the vowel is unstressed. Therefore, a person does not know which un-neutralized vowel is underlying the /ə/ vowel in 'administration'. There are no means by which he can check back to find out what the proper spelling of 'administration' should be. He simply has to learn the word completely by itself. Table 3 shows a few more examples of words in English in which the underlying written vowel is normally pronounced as /ə/.

TABLE 3. ***Neutralization in English vowels***

Written vowel	Spoken vowel	Example
a	ə	sep*a*rate
o	ə	p*o*sition
e	ə	env*e*lope **(noun)**
i	ə	ind*i*vidual
u	ə	diffic*u*lt

You can see that in unstressed positions all vowels have been neutralized to /ə/. There is no way for a person to know what the underlying vowel is. He cannot consciously work back through the neutralization rules. He will therefore have difficulty in spelling these words at the place of the /ə/ vowel. (Incidentally, this is one of the major problems of English spelling, in which the native English speaker has just as much difficulty as the foreign learner.)

Whenever a language has a process of neutralization, it is likely to create spelling problems. If there are no rules by which a person can determine what the pre-neutralized phoneme is, the person will have no way of knowing how to spell the word. He will have to learn to spell such words individually by rote.

Word division

In some languages it is difficult to determine where a word begins and where it ends. In such languages there will be spelling problems with word division. Such problems tend to be especially strong when the language makes it possible to add a large number of morphemes to some root morpheme to create words of great length. There are many occasions when a person is not consciously able to decide how many of the morphemes are part of one word.

This problem is made even greater if, as in the case of Pedi, there is **a mixture of morphemic division and word division** in the normal writing system. There is no way except through the learning of rules that people will know when to divide by words and when to divide by morphemes. Unfortunately, most literacy programmes are reluctant to do any teaching of grammatical rules or anything that sounds similar to grammatical rules. As a result, the rules of word division or morpheme division often are never learned in a literacy class. In fact, it is true that literacy workers do not always know the rules for word division themselves. They simply divide the words as it suits them.

From my personal experience, it is true that the most common spelling problem in languages where the written symbols fit the sounds well is in word division. Where there are problems in a language of morpheme or word divisions, the problems should be dealt with in the literacy course.

Spread phonemes

In some languages there are certain phonemes which are spread over two syllables. In such languages there is a spelling problem of whether to write one symbol or two for the phoneme. For example, in English, consonants such as /l m n r/ between vowels are often spread over two syllables. The pupil then has difficulty in knowing whether to write a word as *ommit,* for example, or as *omit*. Does he write *allow* or *alow, comunity* or *community?* Such spelling problems are formed by the nature of the language and are as difficult for the native speaker as for the foreign learner.

QUESTIONS

1. *Can you think of any examples of neutralization in any languages you know?*
2. *Why would the italicized syllables in the following words be difficult to learn to spell?* di*ffi*cult—*pro*nounce—*po*sition—*pre*vent—*emi*grate—princi*ple*—gra*mma*tical—princi*pal.*

Differences between reading and writing

Chapter 8—Special problems in literacy: What this chapter is about; The phoneme and alphabetic writing; Learning to spell—formal difficulties; DIFFERENCES BETWEEN READING AND WRITING; Linguistics and numeracy.

Language ability is not a single skill. In oral language there is a difference between the skill of speaking and the skill of understanding. Anyone who has learned a second language may have found that at times he could understand more than he could speak. The skill of comprehension in such cases has been learned at a faster rate than the skill of production.

In written language there is also a difference between the skills of **reading** and the skills of **writing.** A person normally learns to read more quickly than he learns to write. In literacy programmes reading skills nearly always go beyond writing skills. This may be partly due to the fact that, in most literacy programmes, the greater emphasis in teaching is devoted to reading skills. Writing skills are often seen as secondary and receive little attention.

In order for pupils to get equal facility in reading and writing, more time must be devoted to writing than to reading. It is normally true that a person can read anything that he is able to write: but it is not true that a person is able to write anything that he is able to read. Reading is a different process from writing. There are different types of skill involved.

Reading is a **recognition** skill. Something is already produced. The reader must basically recognize what is there and recognize the rules for relating the written symbol to the sound system. Writing, however, makes greater use of **recall** skills. The person must recall independently of outside assistance the proper form of letters, the proper spelling of words. Recall learning is nearly always slower to develop than recognition learning. For recall learning requires greater independence in the learning process.

QUESTION

1. *Suppose you were starting a literacy programme in the Arunta language of Australia. At the end of three months of classes, would the pupils be more advanced in writing ability or reading ability? How do you know?*

Linguistics and numeracy

Chapter 8—Special problems in literacy: What this chapter is about; The phoneme and alphabetic writing; Learning to spell—formal difficulties; Differences between reading and writing; LINGUISTICS AND NUMERACY.

Arithmetic is a formal mathematical system. Linguistics, as a science, is not concerned with all formal mathematical systems but only with language and those mathematicals which can explain language. Thus linguistics has very little to say about the teaching of basic arithmetic in literacy programmes. But there are a few areas where linguistics and arithmetic overlap.

The symbols used

Mathematical symbols and the symbols used in alphabetic writing systems are very different in nature. Mathematical symbols relate directly to semantic units. They do not relate to phonological units nor to the grammatical structure of language.

Therefore, if one teaches reading and writing at the same time that one teaches arithmetic, one is teaching **two different concepts** at the same time—one teaches the symbols for reading as symbols relating to phonological structure and the other symbols for arithmetic as relating to semantic structures.

Even the symbols used in the simplest forms of numeracy are of more than one type. There are symbols which relate to numerals (1, 2, 3), symbols which relate to operations, (+, −, ÷, ×), and at least one symbol relating to the concept of equality (=). If the teaching of simple set theory is taught, there are additional types of symbols, including the very important symbols of bracketing.

Not only are the symbols of mathematics different in nature from those of writing, but their **ordering** can also be different. In a given language, the normal ordering for writing an alphabetic system is either from right to left or from left to right.

In numeracy the ordering is of another nature. One can write horizontally from left to right:

$$3 + 4 = 7$$

Or one can write vertically from top to bottom:

$$\begin{array}{r} 3 \\ \underline{+4} \\ 7 \end{array}$$

(Note that in writing vertically a horizontal line replaces the symbol representing equality.) Although simple sums are often written horizontally, more difficult sums are usually written vertically. For example, it is much easier to do the calculation 794+3,769+423+762+1,198 if it is written vertically, as on the following page.

$$\begin{array}{r} 794 \\ 3{,}769 \\ 423 \\ 762 \\ \underline{+1{,}198} \end{array}$$

The reason for this greater ease of calculation is that the vertical ordering puts numerals which must be mutually interactive in close spatial contact with each other. Note that for two processes—addition and multiplication—it is possible to operate from bottom to top as well as from top to bottom. Normally, only addition is actually carried out from bottom to top. Note also that the actual direction in doing sums written vertically is from right to left, in contrast to the direction for reading in many languages.

All of the above illustrates that numeracy uses different types of symbols and different ordering and operations of symbols from reading and writing. These differences can cause learning problems for pupils who are learning both skills at the same time. It would seem best for the teacher to be well aware of these differences and to present the material in a way in which the differences are made clear. The teacher can use discussion, questions and answers, in order to get the pupils to identify the differences in the two systems.

The semantic framework

Numeracy, as normally taught in literacy programmes, makes use of a numbering system with a base of ten. In mathematics, systems with a base other than ten are common and are in some circumstances more useful than a base of ten.

Most languages use a base of ten as the normal semantic framework for counting. In such languages the normal counting systems operate in multiples of ten—ten, twenty, thirty, etc. With such languages, a mathematical system using a base of ten is quite appropriate and is reasonably easy to understand. For people think in terms of tens and multiples of tens in these languages.

But counting systems based on ten are not universal in language. There are some languages which use a base other than ten (usually five). Such languages are, however, rare. For people speaking these languages, learning mathematics with a base of ten is more difficult.

There are, in addition, languages which operate on a base of ten, but which use a rather **complex means of counting.** Sotho, for example, has single word roots for numerals one to five, but after that uses verb constructions to indicate number. The phrase in Sotho for 999, for example, is *makholo a robileng mono o le mong a nang le mashome a robileng mono o le mong a nang le metso e robileng mono o le mong.* Numbers in the tens or hundreds of thousands are incredibly complex in Sotho. Because of this complexity, Sotho speakers normally borrow number terms from English.

It is likely that a language with complex counting systems will borrow counting terms from other languages. In such cases, some adults will understand the borrowed terms better than the others.

There is another problem with numeracy relating to the semantic framework of people. This problem is in relation to the examples used in teaching numeracy. The situation here is a simple one—the objects and events in examples used in teaching numeracy should be within the semantic framework of the learners and should be relevant to their lives.

Teachers sometimes believe that mathematics is a universal language and that, therefore, one can use mathematics textbooks with problems concerning bags of potatoes, when the staple food of the area is millet. It seems wise to have the problems in numeracy relate as much as possible to the everyday life of the people. In more advanced courses, it may be fitting to teach numeracy as a more abstract system, but the emphasis in basic courses is likely to remain on the practical uses of numeracy.

Learning the 'grammar' of numeracy

The basic rules of numeracy—the multiplication tables, how to do long division, etc.—make up the special grammar of numeracy, the universal language. Much of the learning time in numeracy will be spent on learning the basic arithmetical facts and how to manipulate these facts.

But many people who can perform the basic manipulations successfully have a special difficulty. This is the difficulty of **solving problems presented in words.** Normal language to many people is not related to numeracy, except for counting. And many people find it difficult to translate word descriptions into mathematical language. For example, assume the following typical numeracy problem.

> Petrus has thirty bags of rice. Hardesh has twice as many bags as Petrus. And Sandoz has one third as many bags as Hardesh. How many bags of rice does Sandoz have?

Many people can easily multiply 2 by 30. And they can easily divide 60 by 3. But they have difficulty knowing that this is what they must do in order to solve the problem. The difficulty is not in doing numeracy calculations but in translating a word problem into the language of numeracy.

Some of the difficulty comes, I believe, from the lack of realism in some problems presented. Many problems would never occur in real life, but only in textbooks. Many learners may wonder why one would want to know the answer. This part of the problem can best be solved by careful preparation of course materials. But, even with realistic problems, the class will probably need to give much time to the translation of normal language into mathematical terms.

QUESTIONS

1. *Does the language you use in your literacy programme have a complex counting system? If so, how can you simplify it for use in numeracy classes?*
2. *What problems are caused by teaching reading and numeracy at the same time?*

CHAPTER NINE

Literacy and language-learning

How to use this book; What linguistics is all about; Choosing the language for literacy; Developing a written language; Producing literacy materials; Literacy and change; Linguistics and communication; Special problems in literacy; LITERACY AND LANGUAGE-LEARNING.

What this chapter is about

Many literacy workers find that they become involved in language-learning programmes. This chapter looks at some of the areas involved in such programmes.

The chapter is not a course on producing a language-learning programme. That is a very complex subject and is treated more fully in other books in this same series, as well as in a large quantity of other materials outside this series.

This chapter looks primarily at the relationships between literacy programmes and language-learning programmes. It begins with a section contrasting learning to read a home language and learning to speak a new language. It then deals with learning to read a new language as opposed to learning to speak a new language. Next comes a section dealing with the role of literacy within a language-learning programme and finally some suggestions for those who find it their task to plan a language-learning literacy programme.

Learning to read a language you can speak versus learning to speak a new language

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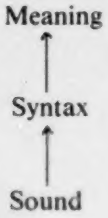
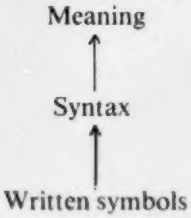
Chapter 9—Literacy and language-learning: What this chapter is about; LEARNING TO READ A LANGUAGE YOU CAN SPEAK VERSUS LEARNING TO SPEAK A NEW LANGUAGE; Learning to read a new language versus learning to speak a new language; The role of literacy within a language-learning programme; Planning a language-learning literacy programme.

Do you remember these diagrams?

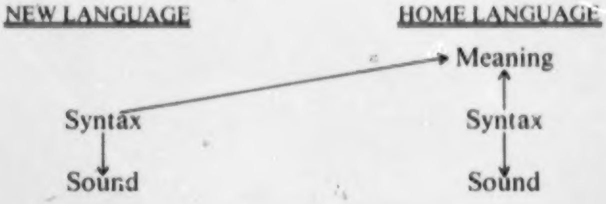




These diagrams show the similarities between a written language and a spoken language. When a person is learning to read a language that he can already speak, it is a **relatively simple process.** This is particularly true if it is an alphabetic writing system. As has been pointed out earlier in this book, the person goes from the written symbol to the spoken symbol. From there he already knows the relationships between the sound component, the syntactic component and the semantic component. All of that part of language he knows in the spoken language. Thus the reading process can be limited to learning to associate written symbols with sound symbols.

But look what a difference learning to speak a new language is! When a person learns to speak a new language he does not know the sound component, the syntactic component, or the semantic component. He must learn to control all three of these components. He is starting at the very beginning and must learn a tremendous amount. Some people have argued that learning a language is the **most complex mental feat** that man accomplishes.

It may be that a person will learn fairly easily to control much of the sound system. However, it is difficult to learn all the complexities of stress or pitch or tone as well as the consonants and vowels of a language. And a person can learn to control quite a bit of the syntactic system, but much work is involved. The semantic system he may never learn to control well. He may simply use his home language semantic structure as in the following diagram:



If this happens, he has not truly learned the language.

When a person is learning a new language and learning to read that new language at the same time, he might have materials that *look* similar to literacy materials. But they are quite different. For he has so much more to learn in language-learning.

No-one should ever make the mistake of **confusing literacy with language-learning.** They are two separate processes. The amount of time used to learn the two processes varies tremendously. The types of material vary; the skills of the teachers vary; the rates of learning vary. Yet in many places people have confused the two processes.

It is not at all unusual for people to say 'literacy' and mean 'language-learning'. Sometimes administrators of programmes or people on the fringes of programmes are not clear about the difference. They may commit themselves to a literacy programme, thinking that they are going to get language-learning results. If they do not get these results, they often tend to be discouraged and to try to discourage others involved in literacy programmes. This is particularly true in work-oriented literacy programmes in industry.

QUESTIONS

1. *Which will take longer—to learn to read one's home language or to learn to speak a new language?*
2. *Why is it dangerous to confuse the terms literacy and language-learning?*

Learning to read a new language versus learning to speak a new language

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Chapter 9—Literacy and language-learning: What this chapter is about; Learning to read a language you can speak versus learning to speak a new language; LEARNING TO READ A NEW LANGUAGE VERSUS LEARNING TO SPEAK A NEW LANGUAGE; The role of literacy within a language-learning programme; Planning a language-learning programme.

It is possible to learn to read a new language without being able to speak the language. Often in universities there are language courses given which make no real effort to teach people to speak the language. They tend to teach the grammar of the language and to teach people to read the language.

There is nothing wrong with this type of a programme—if the people involved have decided that this is what they want. It may be that a person is interested in doing research in the written materials of the language. For him it may be sufficient to be able to read the language. Or it may be that a person cannot anticipate that he will ever go to a country where a particular language is spoken; yet he may have some need to be able to read the language. These are legitimate reasons for programmes that teach people to read a language but not to speak it.

Yet it is true that most people who are interested in learning a language are interested in learning to speak the language. It may be that they have very definite uses for the language, or it may be that they simply have a mild interest in learning to speak the language. Whatever the motivation, it appears that most language courses should teach spoken language ability.

Wherever the literacy worker is involved in preparation of a language-learning programme, he must make it very clear whether it is a **reading only programme** or a **speaking and reading programme.** The time involved for the learning process is quite different for the two types of programme. The types of teacher training are quite different. The types of materials involved are different. Yet it is amazing how often language programmes will hire teachers who can read the language involved but cannot speak the language fluently. And it is not at all unusual that language programmes will use materials which are designed to teach people to read the language but which have no great emphasis on teaching the spoken language. Both such courses can be of value. One must know, however, which of the two courses is being presented.

QUESTIONS

1. *Will the people you are working with be interested in a spoken language course or a reading course?*
2. *How can you make sure that you are right about your answer to the above question?*

The role of literacy within a language-learning programme

Chapter 9—Literacy and language-learning: What this chapter is about; Learning to read a language you can speak versus learning to speak a new language; Learning to read a new language versus learning to speak a new language; THE ROLE OF LITERACY WITHIN A LANGUAGE-LEARNING PROGRAMME; Planning a language-learning literacy programme.

As was stated above, most language-learning programmes are designed to teach people to speak the language. Yet at the same time most of these programmes would also like to teach people to read and write the new language. Here are some suggestions for those who are preparing such programmes.

Literacy in the home language, or at least in some language, is extremely important for people who are in a language-learning programme which includes learning to read and write the new language. It is very difficult to teach people the reading process while one is teaching them a new language. It is, in my opinion, much more successful to teach people **home language literacy first** and then put them in to a second language programme. Thus a reading ability in some language can often be seen as a prerequisite for entering a language-learning course.

Within the language programme itself, speaking takes precedence over reading and writing. This is important if a spoken language ability is going to result. Many language-learning programmes teach people to read and write and, it is hoped, teach them to speak. The order should be reversed. A person learns to speak and then he learns to read and write what he has spoken. Some people have given the very definite order in language-learning of: (a) hearing before speaking; (b) speaking before reading; (c) reading before writing.

This would seem to be the generally preferred order in language-learning skills. This is particularly true for people who have not had much experience in a classroom. They are accustomed to learning by hearing and not by seeing written things. On the other hand, some people who have had quite a bit of schooling are accustomed to learn by seeing written materials. For them it can be useful to have writing as an aid in learning to speak.

For example, when a person is first learning to speak a language, he may have difficulty in hearing the separation of one word from another. But if he sees the sentences written, he can often very easily learn to distinguish between one word and another. Thus, as a general rule, reading should come after speaking; but reading can also be used as a valuable tool in teaching a person to speak a language. But you will recall that this book is not, primarily, concerned with language teaching. Therefore, we will not talk here about the details of language-learning.

QUESTIONS

1. *If you teach a person a new language by giving him written materials to*

translate, will he learn to speak the language fluently as well?
2. *How can you make sure that a person learns to speak the language and not just to read it?*

Planning a language-learning literacy programme

Chapter 9—Literacy and language-learning: What this chapter is about; Learning to read a language you can speak versus learning to speak a new language; Learning to read a new language versus learning to speak a new language; The role of literacy within a language-learning programme; PLANNING A LANGUAGE-LEARNING LITERACY PROGRAMME.

Many literacy workers find that, once people have learned to read one language, they want to learn to speak some other language. Then the literacy worker finds that he must develop a language-learning literacy programme. Most literacy workers are very much aware of the reading side of language, for this is where most of their experience exists. As a result, it appears that many literacy workers, when producing a language-learning programme, prepare a literacy programme in the new language. Most often this takes the form of a **bilingual** (often referred to as 'polyglot') **reading book.** The literacy workers feel that if they can produce a few primers with home language on one side of the page and the new language on the other side of the page, a person can learn to speak and read the other language. Often the argument is given that the home-language text will serve as a bridge to the new language. This is not a very good approach for teaching people to speak another language for the following reasons:

1. This approach is too book-centred. If a person were only wanting to learn to read the language, it would be of more value. But for a person who wants to learn to speak the language, it is not very useful.
2. Such an approach is not very valuable because in many cases the materials are only translations from the home language. One produces a simple book in the home language, translates it into the new language, and hopes this is sufficient. It is not. The materials are too home-language oriented.
3. These materials tend to be organized only in terms of the phonological component of the new language—or at best primarily in terms of the phonological component with slight attention to syntactical organiza-

tion. A language course must be planned carefully to include ordering of phonological, syntactical and semantic components.

The teaching of a new language, as has already been said, is much more complex than the teaching of reading. It is completely wrong to produce a language-learning programme based upon a few short primers of approximately the same length as literacy materials or perhaps slightly longer. The language-learning programme should be seen as something quite different from the literacy programme.

It should include lessons that are primarily centred around the new language and the spoken needs of the learner. However, it is useful to include some lessons or sections of lessons that compare the sounds of the new language with the sounds of the home language. If the languages are closely related, the lessons can include work which compares meanings or grammatical structures in the two languages. But **the new language is the basis** for the production of a language-learning course—not the home language.

The language-learning programme will include lessons which will centre around the **oral use of the language** by the pupils. There are various types of exercise which have been found to be useful. We will not go into any details in this book about the particulars of oral exercises. However, one must realize that a simply written story is not the type of material which will be useful for most oral exercises.

The language-learning programme should make use of **the voice of a native speaker** of the language. If the teacher is not a native speaker of the language, there should be some form of tapes or perhaps radio or television broadcasts which can supply native speech. It is also possible to have a native speaker of the language as a co-teacher with the non-native speaker.

The language-learning programme often makes use of a wide range of audio-visual materials of a different type from those used in a literacy programme. Again, the major point here is that the literacy course is a different thing from the language-learning course.

The literacy worker who finds that he has been given the task of producing a language-learning programme must undertake a bit of study. He should study a few of the very useful books on language teaching. He should look at several highly successful language courses which have been produced by governments, universities or commercial publishers. And the person producing such a course should consult as much as possible with anyone in the country who has had *success* with teaching a spoken language. Only then, after this kind of study, the person should begin to prepare materials.

QUESTIONS

1. *Where could you get assistance if you were called upon to produce a language course?*
2. *Why should a language course be centred on the oral use of the language?*

APPENDIX I

Suggested readings

The following list of suggested readings has been deliberately kept very short. There are literally hundreds of other books which would be useful to you. But most people seem to be bewildered when faced with a long reading list. They do not know where to start. All of the following books and articles are basic in nature. The titles are all straightforward and indicate what the books are about. And all of them have longer bibliographies in them if you are interested in additional reading.

CHOMSKY, CAROL. Reading, writing and phonology. See: Lester, M. *Readings in applied transformational grammar*, 311-35.

CHRISTOPHERSEN, P. *Second language learning: myth and reality*. Baltimore, MD, Penguin, 1973.

CONDON, J.C. JR. *Semantics and communication*. 2nd ed. New York, NY, Macmillan, 1975.

CORDER, S.P. *Introducing applied linguistics*. Baltimore, MD, Penguin, 1973.

GORMAN, MARGARET. *The educational implication of the theory of meaning and symbolism of general semantics*. Washington, DC, Catholics of America Press, 1958.

GUMPERZ, J.J.; HYMES, D. *Directions in sociolinguistics: the ethnography of communication*. New York, NY, Holt, Rinehart and Winston, 1972.

HENLE, P. *Language, thought and culture*. Arbor Paperbacks, 1965.

KAVANAGH, J.F.; MATTINGLY, I.G. *Language by ear and by eye: the relationships between speech and reading*. Boston, MIT Press, 1972.

KIMBALL, J.P. *The formal theory of grammar*. Englewood Cliffs, NJ, Prentice-Hall, 1973.

LESTER, M. *Readings in applied transformational grammar*. 2nd ed. New York, NY, Holt, Rinehart and Winston, 1973.

LYONS, J. *Introduction to theoretical linguistics*. Cambridge, Cambridge University Press, 1969.

NIDA, E.A.; TABER, C.R.; DRILL, J. *The theory and practice of translation*. Leiden, E. J. Brill, 1969.

OSGOOD, C.; SUCI, G.J.; TANNENBAUM, P.H. *The measurement of meaning*. Urbana, IL., University of Illinois Press, 1957.

PRIDE, J.B.; HOLMES, J. *Sociolinguistics: selected readings*. Baltimore, MD, Penguin, 1972.

SAPORTA, S. *Psycholinguistics: a book of readings*. New York, NY, Holt, Rinehart and Winston, 1961.

SMALLEY, A. *Orthography studies: articles on new writing systems*. London, United Bible Societies, 1964.

WARDHAUGH, R. *Reading: a linguistic perspective*. New York, NY, Harcourt, Brace and World, 1969.

APPENDIX II

Glossary

BACKGROUND NOISE: Situations which make hearing difficult.This can be other noise, distance from the speaker, etc.

CLASSICAL LANGUAGE: A language form which is not normally spoken in domestic situations, which has been written for a long time, and which is considered to be the language of the educated.

CONNOTATIVE MEANING: The value judgement or emotional response evoked by a word. It is contrasted with denotative meaning.

DEEP STRUCTURE: The underlying abstract structure of language before the rules are applied which will transform it into surface structure.

DENOTATIVE MEANING: Meaning which designates the reference of an object, event or abstract. It is contrasted with connotative meaning.

DIALECTOLOGY: The aspect of linguistics which is concerned with the relationships among dialects, and between dialects and languages.

DISCOURSE: Connected continued language longer than a single sentence.

EMBEDDED CLAUSE: A dependent clause within another clause—the embedded clause serves a function more frequently served by a word or a phrase.

FEEDBACK: The response from participants in communication which allows each to know whether there is continuing agreement as to meaning.

FUNCTOR: See grammatical morpheme.

GRAMMATICAL MORPHEME: A morpheme which realizes semantic relationals and/or syntactic relationships. It is also called a functor and is contrasted with a lexical morpheme.

HIERARCHY OF MEANING: A system of meaning is a hierarchy of more general to more specific.

IDEOLECT: The form of language spoken by a single individual.

IDEOPHONE: A word which by its sound is considered to represent the sound or other qualities of some real-world object or activity.

INFORMATIVE STYLE: A style of language in which the speaker or writer is primarily concerned with conveying information and thus choosing options which will convey information as clearly and unambiguously as possible. It is contrasted with literary style.

KEYWORDS: Words which are used as central learning points in some literacy programmes. The words have semantic content relating to what are considered major issues in the lives of the learners and graphic structure which is useful for analysis and synthesis in the teaching of reading.

LEXICAL MORPHEME: A morpheme which realizes semantic objects, events, or abstracts. It is contrasted with a grammatical morpheme.

LINGUA FRANCA: A language generally spoken in a multi-language situation as a convenient form of communication. The lingua franca may at times not be the home language of any of the participants in communication.

LITERARY STYLE: A style of language in which the speaker or writer is primarily concerned with the emotional response which the message produces. It is contrasted with informative style.

MORA: A unit of measure of vowel or syllable length in time.

MORPHEME: The smallest unit of grammar which is related to a single meaning. Words can be made up of a single morpheme ('dog') or more then one morpheme ('walked' ='walk+past tense').

NEUTRALIZATION: A process in phonology in which there is no contrast in the surface structure of what at a deeper level are two separated and contrasting sound units.

OFFICIAL LANGUAGE: A language form accepted by national governments for use in certain formal public sectors or situations.

ORTHOGRAPHY: The rules of spelling and of forming words and sentences in a language.

PARALANGUAGE: The tones of voice, facial expressions, attentiveness, etc., which give special meaning to the words a person speaks.

PHONE: A single discrete sound as it occurs in the surface structure of language.

PHONEME: A unit of sound which was recognized by earlier linguists as a class of sounds which were phonetically similar and which showed patterns of occurrence such that no two members of the class ever distinguished a difference in meaning. The concept of the phoneme has been used as the basis for alphabetic writing in numerous languages. At present the traditional concept of the phoneme is rejected by most linguists.

PHONOLOGY: The component of language which is concerned with the sound system. It is distinguished from semantics and syntax.

POLYGLOT READERS: A bilingual piece of reading material which is often used in teaching reading of a second language after a first language can be read.

PSYCHO-LINGUISTICS: The aspect of linguistics which is concerned with the psychological relationships with language. In particular, psycho-linguistics has been concerned with the nature of language-learning—both first-language learning by the child and second-language learning.

READABILITY: The degree of difficulty of written materials. Instruments for measuring reading difficulty are commonly called readability formulas.

READABILITY FORMULAS: See readability.

RELATIONAL: A class of semantic units which show relationships between objects, events and abstracts.

RESOURCE TRADITION: A written language or languages from which certain conventions are borrowed (often unconsciously) when another language is written for the first time. It is contrasted with a source language.

SEMANTICS: The meaning component of language. It is distinguished from syntax and phonology.

SEMANTIC DIFFERENTIAL INVENTORY: A type of test which measures the emotional impact of words.

SOCIO-LINGUISTICS: The aspect of linguistics which is concerned with the relationships between language and social situations.

SOURCE LANGUAGE: A spoken language which is the basis for representation by a written language. It is contrasted with a resource tradition.

STANDARD LANGUAGE: A language which is written and which has an accepted, established form of writing.

STYLE: The choice among a variety of possible ways of expressing oneself which a speaker or a writer makes.

SURFACE STRUCTURE: The structure of language in the form that is normally heard or written. It is the end product of all the rules which are called into play in the production of language. It is contrasted with deep structure.

SYLLABIC WRITING: A way of writing in which individual written symbols represent syllables.

SYNTAX: The component of language which is concerned with the structure of phrases, clauses and sentences. It is distinguished from semantics and phonology.

SYSTEMATIC PHONEME: Unit of sound recognized in transformational generative grammar. It is not the surface structure sound which one hears but the abstraction from which such surface structure derives. It is not the same as the phoneme recognized by earlier linguists.

TEXT BLOCKS: A unit of discourse centring around a dominant semantic content.

THEORETICAL LINGUISTICS: The aspect of linguistics which is concerned with the nature of language in general. It tries to provide a theoretical model for language.

TRANSFORMATIONAL GENERATIVE GRAMMAR: A theory of language which views language as being generated as surface structure by transformation on deep structure.

TRANSITION: The movement from one part of a discourse to another.

UNION LANGUAGE: A form of written language with a common base from a number of dialects of a language. It is developed as a means of having a written language which can be easily understood among all dialects.

VERNACULAR LANGUAGE: A language which has no standard written form although attempts may have been made to write it.

WORD: A unit of grammar which is characterized by its ability to contrast and combine within phrases and clauses. A word in spoken language does not always correspond on a one-to-one basis with a word in written language. A word in an alphabetic written language can usually be defined as a written unit characterized by space on each side.

APPENDIX III

Hints for translators of this book

In some ways this book will be easy to translate, but in other ways it will be difficult. It will be easy in that the language used is fairly simple. It will be difficult for two reasons.

1. **Some technical linguistic terms are used. These will not be found in most dictionaries and translators will have to consult professional linguists, or in some cases may even have to create new terms. (It is sometimes a good solution simply to use the English terms if no term exists in the language of translation.) A list of most of these technical terms is given at the end of this discussion.**
2. **A number of language examples are given. Language examples from languages other than English can be used as they exist. But most English examples are used because they can illustrate to the English reader the linguistic points under discussion. Parallel examples for these should be found in the language of translation. But, of course, there will not be parallels for all of these in the language of translation since all languages differ in details. This is particularly true for examples of the English writing system. In such cases you should keep the English example. A list of these English examples is given on pages 139-141. If great difficulty is encountered the author of this manuscript will be happy to give advice through the International Institute for Adult Literacy Methods.**

It is anticipated that there will be two types of re-working of this manual—a translation into international languages used in a number of nations; an adaptation (probably abridged) into languages of more limited geographical usage. The translations should be fairly true to the original, with the types of changes in examples suggested above. The adaptations can be more selective and more directed at specific training situations. Since the adaptor must choose and select material, he should work cautiously; and he must make sure that he understands what he is adapting.

The suggested use of the book in Chapter 1 will be helpful for those adapting the book for specific situations. Note also that on page 14 it is stated that 'the book is written in English' and that many examples are in English. In these cases, English will, of course, be changed to the language of translation.

A LIST OF TECHNICAL TERMS TO BE TRANSLATED

Term	*First appears in text on page*
linguistics	13
dialectology	18
socio-linguistics	18
psycho-linguistics	18
semantic	18
syntax	18
syntactic	18
phonological	18
phonology	18
phoneme	19
phone	20
semantics	20
morpheme	22
standard language	27
lingua franca	38
union language	41
syllabic writing	46
source language	48
resource tradition	48
lexical morpheme	63
grammatical morpheme	63
functors	63
ideophone	67
redundancy	67
background noise	68
readability	70
readability formulas	70
embedded clause	70
relationals	73
hierarchy of meaning	73
denotative meaning	74
connotative meaning	74
Semantic Differential Inventory	75
discourse	76
transition	76
text blocks	77
concept	80
informative style	82
literary style	82
ideolect	95
feedback	96
paralanguage	97
surface structure	110
deep structure	110
Transformational Generative Grammar	110
systematic phoneme	111
neutralization	115
recognition (learning)	118
recall (learning)	118
polyglot	128

ENGLISH EXAMPLES FOR WHICH PARALLELS IN LANGUAGE OF TRANSLATION SHOULD BE SOUGHT

Example	*Occurs on page*	*Comment*
'Building' and 'shack' with different emotional responses.	21	Easy to find a comparable example.
'Incomplete' made up of more than one morpheme.	22	Easy.
mora	52	

Example	*Occurs on page*	*Comment*
'Boys' made up of more than one morpheme.	63	Easy.
Readers do not notice grammatical morphemes.	63	Easy.
Relative frequency of lexical and grammatical morphemes.	65	Requires library research for languages such as Spanish, French—difficult for some languages.
'you' less formal than 'one'.	66	Fairly easy to find similar situation.
'Nominative absolute' as special written structure not normally used in spoken English.	66	Easy for most languages written a long time—difficult for languages written a short time.
'Ouch' as example of words rarely written.	67	Easy.
Grammatical structure which is difficult to read.	69	Frequently found in language but might take research to discover what such structures are.
Hierarchies of meaning.	73	Easy
Little emotional response to words such as 'do', 'doer'.	74	Easy.
'Once upon a time' as introduction to fairy tales.	76	Fairly easy to find parallel examples.
Examples of English transitional sentences.	77	Easy.
'Do, make' etc., as examples of highly frequent words with little lexical content.	80	Easy.
English spelling according to surface phonemes	112	May be difficult since a lengthy discussion is dependent on the example.

Example	Occurs on page	Comment
Neutralization of English vowels.	115	Fairly frequent in language but might be difficult for translator to discover; the somewhat lengthy discussion is dependent on the example.
Phonemes spread over two syllables and causing spelling problems.	117	Easy for some languages, difficult for others.

Other titles in *Literacy in development: a series of training monographs,* Series editor, H.S. Bhola, Professor of Education, Indiana University at Bloomington, Indiana, United States of America:

The use of radio in adult literacy education, by Richard C. Burke

Programmed instruction for literacy workers, by S. Thiagarajan

Learning to read and reading to learn: an approach to a system of literacy instruction, by Sohan Singh

Towards scientific literacy, by Frederick J. Thomas and Allan K. Kondo

Visual literacy in communication: designing for development, by Anne C. Zimmer and Fred A. Zimmer

Evaluating functional literacy, by H. S. Bhola

Rural public libraries, by E. C. Shaw

The process of primer construction, by Ernest W. Lee

Simulations and games in literacy work, by David R. Evans

Reading materials for new readers: why? what? and how?, by H. S. Bhola

Literacy programmes for adult women, by Marion A. Halvorson

The use of the press in literacy promotion, by Renán Flores Jaramillo

The training of literacy trainers, by Paula Campos de Rozsavolgyi and John W. Ryan

Teaching words and ideas to adults, by Edgar Dale

Planning, organizing and mobilizing for literacy action, by H. S. Bhola

The ABCs of literacy: lessons from anthropology, by Achola O. Pala

The ABCs of literacy: lessons from psychology

Literacy and national consciousness (The ABCs of literacy: lessons from the policy sciences)